

Query Match 24.9%; Score 52; DB 2; Length 199;
Best Local Similarity 40.0%; Pred. No. 3.1;
Matches 12; Conservative 6; Mismatches 10; Indels 2; Gaps 1;

QY 6 NSADAPYVGA--KIGQVDAKQINGNTAY 33
| | | | | : : : : :
Db 145 NKIDLAPYVGA DLKVMERSKRIAKSPLE 174

RESULT 2

US-08-472-285-6

; Sequence 6, Application US/08472285
; Patent No. 6027878

GENERAL INFORMATION:

APPLICANT: LABIGNE, AGNES
APPLICANT: COSSAC, VALERIE

APPLICANT: FERRERO, RICHARD

TITLE OF INVENTION: GENES OF HELICOBACTER PYLORI NECESSARY

TITLE OF INVENTION: FOR THE REGULATION AND MATURATION OF UREASE AND THEIR USE

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,

STREET: 1755 S. Jefferson Davis Highway, Suite 400

CITY: Arlington

STATE: Virginia

COUNTRY: U.S.A.

ZIP: 22202

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/472,285

CLASSIFICATION: 435

PRIORITY APPLICATION DATA:

APPLICATION NUMBER: US 08/211,312

FILING DATE: 01-JUL-1994

APPLICATION NUMBER: FR 91 12198

FILING DATE: 03-OCT-1991

PRIORITY APPLICATION DATA:

APPLICATION NUMBER: PCT/FR92/00921

FILING DATE: 02-OCT-1992

ATTORNEY/AGENT INFORMATION:

NAME: OBLON, No. 6027878man F.

REGISTRATION NUMBER: 24,618

REFERENCE/DOCKET NUMBER: 660-075-0XPCT

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 413-3000

TELEFAX: (703) 413-2220

TELEX: 248855 OPAT UR

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 199 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-472-285-6

Query Match 24.9%; Score 52; DB 3; Length 199;

Best Local Similarity 40.0%; Pred. No. 3.1;
Matches 12; Conservative 6; Mismatches 10; Indels 2; Gaps 1;

RESULT 3

US-08-472-929-6
; Sequence 6, Application US/08472929
; Patent No. 6271017

GENERAL INFORMATION:

APPLICANT: LABIGNE, AGNES

APPLICANT: COSSAC, VALERIE

APPLICANT: FERRERO, RICHARD

TITLE OF INVENTION: GENES OF HELICOBACTER PYLORI NECESSARY

TITLE OF INVENTION: FOR THE REGULATION AND MATURATION OF UREASE AND THEIR USE

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,

STREET: 1755 S. Jefferson Davis Highway, Suite 400

CITY: Arlington

STATE: Virginia

COUNTRY: U.S.A.

ZIP: 22202

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/472,929

FILING DATE:

CLASSIFICATION:

PRIORITY APPLICATION DATA:

APPLICATION NUMBER: 08/211,312

FILING DATE:

PRIORITY APPLICATION DATA:

APPLICATION NUMBER: PCT/FR92/00921

FILING DATE: 02-OCT-1992

ATTORNEY/AGENT INFORMATION:

NAME: OBLON, No. 6271017man F.

REGISTRATION NUMBER: 24,618

REFERENCE/DOCKET NUMBER: 660-075-0XPCT

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 413-3000

TELEFAX: (703) 413-2220

TELEX: 248855 OPAT UR

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 199 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-472-929-6

Query Match 24.9%; Score 52; DB 4; Length 199;

Best Local Similarity 40.0%; Pred. No. 3.1;
Matches 12; Conservative 6; Mismatches 10; Indels 2; Gaps 1;

QY 6 NSADAPYVGA--KIGQVDAKQINGNTAY 33
| | | | | : : : : :
Db 145 NKIDLAPYVGA DLKVMERSKRIAKSPLE 174

RESULT 4

US-08-699-103B-4

; Sequence 4, Application US/08699103B
; Patent No. 6107462

GENERAL INFORMATION:

APPLICANT: Rine, Jasper D.

APPLICANT: Hampton, Randolph

TITLE OF INVENTION: GENES AND PROTEINS CONTROLLING

TITLE OF INVENTION: CHOLESTEROL SYNTHESIS

NUMBER OF SEQUENCES: 25

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson P.C.

STREET: 2200 Sand Hill Road, Suite 100

CITY: Menlo Park

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: August 7, 2002, 17:09:39 ; Search time 20.67 Seconds
(without alignments)
47.268 Million cell updates/sec

Title: US-09-164-714-1
Perfect score: 209
Sequence: 1 A1SYGNADAPYVGAKIGQVDAKQINGKNTAYGIYAGYN 40

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 231628 seqs, 24425594 residues

Total number of hits satisfying chosen parameters: 231628

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: /cgn2_6/ptodata/2/1aa/5A.COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B.COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A.COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B.COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PCFUS.COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/Backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB ID | Description |
|------------|-------|-------------|--------|-------|---|
| 1 | 52 | 24.9 | 199 | 2 | US-08-211-312-6 Sequence 6, App11 |
| 2 | 52 | 24.9 | 199 | 4 | US-08-472-285-6 Sequence 6, App11 |
| 3 | 52 | 24.9 | 199 | 4 | US-08-472-929-6 Sequence 6, App11 |
| 4 | 50 | 23.9 | 833 | 3 | US-08-699-103B-4 Sequence 4, App11 |
| 5 | 50 | 23.9 | 833 | 4 | US-09-229-059-4 Sequence 4, App11 |
| 6 | 49.5 | 23.7 | 1203 | 4 | US-09-351-200-2 Sequence 2, App11 |
| 7 | 48.5 | 23.2 | 1156 | 4 | US-09-001-982-10 Sequence 10, App11 |
| 8 | 48.5 | 23.2 | 1242 | 4 | US-09-001-982-12 Sequence 12, App11 |
| 9 | 48 | 23.0 | 532 | 3 | US-08-911-321-11 Sequence 11, App11 |
| 10 | 48 | 23.0 | 532 | 5 | PCT-US95-13975-2 Sequence 2, App11 |
| 11 | 47.5 | 22.7 | 283 | 2 | US-08-852-401-4 Sequence 4, App11 |
| 12 | 47.5 | 22.7 | 629 | 4 | US-09-300-909-19 Sequence 19, App11 |
| 13 | 46 | 22.0 | 165 | 4 | US-08-858-207A-510 Sequence 510, App |
| 14 | 46 | 22.0 | 832 | 1 | US-08-431-560-1 Sequence 1, App11 |
| 15 | 46 | 22.0 | 832 | 1 | US-08-463-345-1 Sequence 1, App11 |
| 16 | 46 | 22.0 | 1287 | 1 | US-08-200-332-2 Sequence 2, App11 |
| 17 | 46 | 22.0 | 1287 | 5 | PCT-US95-02219-2 Sequence 2, App11 |
| 18 | 46 | 22.0 | 1287 | 5 | PCT-US95-02219A-2 Sequence 2, App11 |
| 19 | 46 | 22.0 | 1296 | 3 | US-08-470-260-3 Sequence 3, App11 |
| 20 | 46 | 22.0 | 1296 | 3 | US-08-471-491-3 Sequence 3, App11 |
| 21 | 46 | 22.0 | 1296 | 3 | US-08-466-662-3 Sequence 3, App11 |
| 22 | 45.5 | 21.8 | 251 | 1 | US-08-209-747-8 Sequence 8, App11 |
| 23 | 45.5 | 21.8 | 331 | 1 | US-08-458-298-8 Sequence 8, App11 |
| 24 | 45.5 | 21.8 | 331 | 1 | US-08-356-180-3 Sequence 3, App11 |
| 25 | 45.5 | 21.8 | 407 | 4 | US-08-661-774E-28 Sequence 28, App1 |
| 26 | 45.5 | 21.8 | 592 | 4 | US-08-961-083-222 Sequence 22, App |
| 27 | 45.5 | 21.8 | 2233 | 2 | US-08-569-853-1 Sequence 1, App11 |

| | | | | | | |
|----|------|------|------|---|-------------------|-------------------|
| 28 | 45.5 | 21.8 | 2233 | 2 | US-08-569-853-2 | Sequence 2, App11 |
| 29 | 45.5 | 21.8 | 2233 | 3 | US-08-987-439-1 | Sequence 1, App11 |
| 30 | 45 | 21.5 | 462 | 2 | US-08-865-597A-2 | Sequence 2, App11 |
| 31 | 45 | 21.5 | 626 | 2 | US-08-965-242-2 | Sequence 2, App11 |
| 32 | 45 | 21.5 | 626 | 3 | US-09-351-215-2 | Sequence 2, App11 |
| 33 | 45 | 21.5 | 968 | 1 | US-08-426-236-2 | Sequence 2, App11 |
| 34 | 45 | 21.5 | 2594 | 4 | US-08-718-388-7 | Sequence 7, App11 |
| 35 | 45 | 21.5 | 5405 | 4 | US-08-718-388-9 | Sequence 9, App11 |
| 36 | 44.5 | 21.3 | 132 | 4 | US-08-961-083-194 | Sequence 194, App |
| 37 | 44.5 | 21.3 | 359 | 1 | US-08-457-997B-2 | Sequence 2, App11 |
| 38 | 44.5 | 21.3 | 359 | 2 | US-08-467-722A-2 | Sequence 2, App11 |
| 39 | 44 | 21.1 | 20 | 3 | US-08-462-221-4 | Sequence 4, App11 |
| 40 | 44 | 21.1 | 32 | 1 | US-08-446-692-21 | Sequence 21, App1 |
| 41 | 44 | 21.1 | 32 | 2 | US-08-488-351A-21 | Sequence 21, App1 |
| 42 | 44 | 21.1 | 74 | 2 | US-08-343-443B-11 | Sequence 11, App1 |
| 43 | 44 | 21.1 | 198 | 2 | US-08-943-915-33 | Sequence 33, App1 |
| 44 | 44 | 21.1 | 207 | 2 | US-08-943-915-2 | Sequence 2, App1 |
| 45 | 44 | 21.1 | 207 | 2 | US-08-943-915-5 | Sequence 5, App11 |

ALIGNMENTS

RESULT 1
US-08-211-312-6
; Sequence 6, Application US/08211312
; Patent No. 5986051
; GENERAL INFORMATION:
; APPLICANT: LABIGNE, AGNES
; APPLICANT: CUSAC, VALERIE
; APPLICANT: FERRERO, RICHARD
; TITLE OF INVENTION: GENES OF HELICOBACTER PYLORI NECESSARY
; TITLE OF INVENTION: FOR THE REGULATION AND MATURATION OF UREASE AND THEIR USE
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: OBLON, SPIVAK, MCLELLAND, MAIER & NEUSTADT,
; ADDRESSEE: P.C.
; STREET: 1755 S. Jefferson Davis Highway, Suite 400
; CITY: Arlington
; STATE: Virginia
; COUNTRY: U.S.A.
; ZIP: 22202
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/211,312
; FILING DATE: 01-JUL-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 12198
; FILING DATE: 03-OCT-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR92/00921
; FILING DATE: 02-OCT-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: OBLON, No. 5986051man F.
; REGISTRATION NUMBER: 24,618
; REFERENCE/DOCKET NUMBER: 660-075-0XPCF
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 413-3000
; TELEFAX: (703) 413-2220
; TELEX: 248855 OPAT UR
; INFORMATION FOR SEQ. ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; TOPOLOGY: 1linear
; MOLECULE TYPE: protein
; US-08-211-312-6

STATE: CA
COUNTRY: USA
ZIP: 94025
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/699,103B
FILING DATE: 16-AUG-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/002,581
FILING DATE: 17-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: Green, Grant D.
REGISTRATION NUMBER: 31,259
REFERENCE/DOCKET NUMBER: 09272/005001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/322-5070
TELEFAX: 650/854-0875
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 833 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-699-103B-4

Query Match 23.9%; Score 50; DB 3; Length 833;
Best Local Similarity 37.8%; Pred. No. 38;
Matches 14; Conservative 7; Mismatches 10; Indels 6; Gaps 2;

QY 6 NSADAPYV--GAKIGVDKQINGKNTAGTYAGYN 40
DB 170 DSAKALLYORAOGLGNLAKOV---LAYKYSGFN 202

RESULT 5
US-09-229-059-4
Sequence 4, Application US/09229059
Patent No. 633172
GENERAL INFORMATION:
APPLICANT: Rine, Jasper D.
TITLE OF INVENTION: GENES AND PROTEINS CONTROLLING
NUMBER OF SEQUENCES: 25
TITLE OF INVENTION: CHOLESTEROL SYNTHESIS
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 2200 Sand Hill Road, Suite 100
CITY: Menlo Park
STATE: CA
COUNTRY: USA
ZIP: 94025
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/229,059
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/699,103
FILING DATE: 16-AUG-1996
APPLICATION NUMBER: 60/002,581
FILING DATE: 17-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: Green, Grant D.
REGISTRATION NUMBER: 31,259
REFERENCE/DOCKET NUMBER: 09272/005001

TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/322-5070
TELEFAX: 650/854-0875
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 833 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-229-059-4

Query Match 23.9%; Score 50; DB 4; Length 833;
Best Local Similarity 37.8%; Pred. No. 38;
Matches 14; Conservative 7; Mismatches 10; Indels 6; Gaps 2;

QY 6 NSADAPYV--GAKIGVDKQINGKNTAGTYAGYN 40
DB 170 DSAKALLYORAOGLGNLAKOV---LAYKYSGFN 202

RESULT 6
US-09-351-200-2
Sequence 2, Application US/09351200
Patent No. 632003
GENERAL INFORMATION:
APPLICANT: BOURBONNAIS, Yves
APPLICANT: LAMARRE, Claude
TITLE OF INVENTION: CANDIDA ALBICANS GENE (CSA1) ENCODING A
FILE REFERENCE: 6013-71"US" CC/
CURRENT APPLICATION NUMBER: US/09/351,200
CURRENT FILING DATE: 1999-07-09
EARLIER APPLICATION NUMBER: CA2,237,134
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO: 2
LENGTH: 1203
TYPE: PRT
ORGANISM: Candida albicans
FEATURE:
NAME/KEY: PEPTIDE
LOCATION: (0)...(0)
US-09-351-200-2

Query Match 23.7%; Score 49.5; DB 4; Length 1203;
Best Local Similarity 48.3%; Pred. No. 72;
Matches 14; Conservative 0; Mismatches 12; Indels 3; Gaps 1;

QY 3 SYGNSADAPYVGAIGVDKQINGKNT 31
DB 951 SYGNSIAQSTSTK---SDAASITGPRT 976

RESULT 7
US-09-001-982-10
Sequence 10, Application US/09001982
Patent No. 620426
GENERAL INFORMATION:
APPLICANT: Bosch, Hendrick J.
APPLICANT: Stiekema, Willem J.
TITLE OF INVENTION: Hybrid Toxin
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 620426artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/001,982
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/602,737
FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: 130-4080/PCT/CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8587
TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 1156 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-001-982-10

Query Match 23.2%; Score 48.5; DB 4; Length 1156;
Best Local Similarity 25.5%; Pred. No. 97;
Matches 14; Conservative 8; Mismatches 16; Indels 17; Gaps 1;

QY 2 ISYGNADAPYVYAKIGVDKQNGKNTAYG-----IYAGY 39
Db 389 ISGQHTATGTILGRNIFRVDQACNLDITYGNRAVFYHDASEGSGRSYEGY 443

RESULT 8
US-09-001-982-12
Sequence 12, Application US/09001982
Patent No. 6204246
GENERAL INFORMATION:
APPLICANT: Bosch, Hendrick J.
APPLICANT: Stiekema, Willem J.
TITLE OF INVENTION: Hybrid Toxin
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6204246artis Corporation
STREET: 3054 Cornwalis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/001,982
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/602,737
FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: 130-4080/PCT/CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8587
TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:
LENGTH: 1242 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-001-982-12

Query Match 23.2%; Score 48.5; DB 4; Length 1242;
Best Local Similarity 25.5%; Pred. No. 1.1e+02;
Matches 14; Conservative 8; Mismatches 16; Indels 17; Gaps 1;

QY 2 ISYGNADAPYVYAKIGVDKQNGKNTAYG-----IYAGY 39
Db 389 ISGQHTATGTILGRNIFRVDQACNLDITYGNRAVFYHDASEGSGRSYEGY 443

RESULT 9
US-08-911-321-11
Sequence 11, Application US/08911321
Patent No. 6010703
GENERAL INFORMATION:
APPLICANT: Roger K. Maes and Stephen J. Spatz
TITLE OF INVENTION: Recombinant Poxvirus
TITLE OF INVENTION: Vaccine Against
TITLE OF INVENTION: Feline Rhinotracheitis
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Ian C. McLeod
STREET: 2190 Commons Parkway
CITY: Okemos
STATE: Michigan
COUNTRY: USA
ZIP: 48864
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 Kb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/911,321
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/096,183
FILING DATE: July 26, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Ian C. McLeod
REGISTRATION NUMBER: 20,931
REFERENCE/DOCKET NUMBER: MSU 4.1-166
TELECOMMUNICATION INFORMATION:
TELEPHONE: (517) 347-4100
TELEFAX: (517) 347-4103
TELEX: No. 6010703e
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 532
TYPE: Amino Acid
STRANDEDNESS: Single
TOPOLOGY: Linear
MOLECULE TYPE:
DESCRIPTION: Polypeptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: feline herpesvirus-1
STRAIN: 1
INDIVIDUAL ISOLATE: C-27
CELL TYPE: N/A
FEATURE:
NAME/KEY:
LOCATION:


```

; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-300-909-19

```

| | | | | |
|--------------------------|-------|---------------|-----------|------------|
| Query Match | 22.7% | Score 47.5 | DB 4 | Length 629 |
| Best Local Similarity | 50.0% | Pred. No. 63 | | |
| Matches 12; Conservative | 1; | Mismatches 8; | Indels 3; | Gaps 1; |

```
QY      2  ISYGN SAD--AQPYVGAKIGQVD  22
          ||| ||      || |||| :|
Db     479  ISYANSKSHFWLQPLADAKIGMLD  502
```

```

RESULT 3
US-08-858-207A-510
: Sequence 510, Application US/08858207A
: Patent No. 6348328
: GENERAL INFORMATION:
: APPLICANT: Black, Michael
: APPLICANT: Hodgson, John
: APPLICANT: Knowles, David
: APPLICANT: Nicholas, Richard
: APPLICANT: Stodola, Robert
: TITLE OF INVENTION: No. 6348328e1 Compounds
: NUMBER OF SEQUENCES: 552
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: SmithKline Beecham Corporation
: STREET: 709 Swedeland Road
: CITY: King of Prussia
: STATE: PA
: COUNTRY: USA
: ZIP: 19406-0939
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Diskette
: COMPUTER: IBM Compatible
: OPERATING SYSTEM: DOS
: SOFTWARE: FASTSEQ for Windows Version 2.0
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/858, 207A
: FILING DATE: 09-MAY-1997
: CLASSIFICATION: 435
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: 60/011670
: FILING DATE: 14-MAY-1996
: ATTORNEY/AGENT INFORMATION:
: NAME: Gimmil, Edward R
: REGISTRATION NUMBER: 38,891
: REFERENCE/DOCKET NUMBER: P50475
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 610-270-4478
: TELEFAX: 610-270-5090
: TELEX:
: INFORMATION FOR SEQ ID NO: 510:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 165 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: MOLECULE TYPE: NO. 6348328e
: US-08-858-207A-510

```

```

Query Match      22.0%; Score 46; DB 4; Length 165;
Best Local Similarity   28.6%; Pred. NO. 20;
Matches    14; Conservative     5; Mismatches    16; Indels    14; Gaps    2.

QY      6 NSADAPF-----VGAKTGV---DAKQINGKNATAYGATACYN 40
          |||::|||::|||::|||::|||::|||::|||::|||::|||
Db       80 NSKDAREVDLALLIEEPIGAKLTGLGPTSOCKNLTGTITVTTPSPSY 128

```

RESULT 14
 US-08-431-560-1
 Sequence 1, Application US/08431560
 Patent No. 5620855
 GENERAL INFORMATION:
 APPLICANT: Anne H. Dantzig, et al.
 TITLE OF INVENTION: Mammalian Influx Peptide
 TITLE OF INVENTION: Transporter
 NUMBER OF SEQUENCES: 2
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Eli Lilly and Company
 STREET: Lilly Corporate Center
 CITY: Indianapolis
 STATE: IN
 COUNTRY: U.S.A.
 ZIP: 46285
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Diskette, 3.50 inch, 1.0 Mb storage
 COMPUTER: Macintosh
 OPERATING SYSTEM: Macintosh
 SOFTWARE: Microsoft Word
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/431,560
 FILING DATE: 01-MAY-1995
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/013,462
 FILING DATE: 04-FEB-1993
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 832 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-431-560-1

| | | | | |
|-----------------------|-------|--------------------|-------|---------------|
| Query Match | 22.0% | Score 46; | DB 1; | Length 832; |
| Best Local Similarity | 36.4% | Pred. No. 1.5e+02; | | |
| Matches | 8; | Conservative | 5; | Mismatches 9; |
| | | | | Indels 0; |
| | | | | Gaps 0; |

```
QY      14 VGAKIGQVDAKQINGKNTAYGI 35
          :| | :| | | | | | :| :| :
Db      581 ICTKVGNVNTAKDPEGLDISYSL 602
```

RESULT 15
 US-08-463-345-1
 : Sequence 1, Application US/08463345
 : Patent No. 5710018
 : GENERAL INFORMATION:
 : APPLICANT: Anne H. Dantzig, et al.
 : TITLE OF INVENTION: Mammalian Influx Peptide
 : TITLE OF INVENTION: Transporter
 : NUMBER OF SEQUENCES: 2
 : CORRESPONDENCE ADDRESS:
 : ADDRESSEE: Eli Lilly and Company
 : STREET: Lilly Corporate Center
 : CITY: Indianapolis
 : STATE: IN
 : COUNTRY: U.S.A.
 : ZIP: 46285
 : COMPUTER READABLE FORM:
 : MEDIUM TYPE: Diskette, 3.50 Inch, 1.0 Mb storage
 : COMPUTER: Macintosh
 : OPERATING SYSTEM: Macintosh
 : SOFTWARE: Microsoft Word
 : CURRENT APPLICATION DATA:
 : APPLICATION NUMBER: US/08/463,345
 : FILING DATE: 05-JUN-1995
 : CLASSIFICATION: 435
 : PRIOR APPLICATION DATA:
 : APPLICATION NUMBER: US 08/013,462

THIS PAGE BLANK (USPTO)

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: August 8, 2002, 18:04:22 ; Search time 77.73 Seconds
(without alignments)
1715.927 Million cell updates/sec

Title: US-09-164-714-6
Perfect score: 543
Sequence: 1 atgaaacttaaaacact.....gcgcattggttttaa 543

Scoring table: IDENTITY NUC
Gapop 10.0, Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 767066

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : Issued_Patents_NA:*

1: /cgn2_6/ptodata/2/ina/5A.COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B.COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A.COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B.COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS.COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|--------------------|-------------------|
| 1 | 39.4 | 7.3 | 846 | US-07-941-523-21 | Sequence 21, App1 |
| 2 | 39.4 | 7.3 | 891 | US-07-941-523-19 | Sequence 19, App1 |
| 3 | 39.4 | 7.3 | 891 | US-08-235-836C-21 | Sequence 21, App1 |
| 4 | 39.4 | 7.3 | 1141 | US-08-235-836C-117 | Sequence 117, App |
| 5 | 39.4 | 7.3 | 1180 | US-08-235-836C-113 | Sequence 113, App |
| 6 | 39.4 | 7.3 | 1324 | US-08-235-836C-119 | Sequence 119, App |
| 7 | 39.4 | 7.3 | 1363 | US-08-235-836C-115 | Sequence 115, App |
| 8 | 39.4 | 7.3 | 1765 | US-08-235-836C-121 | Sequence 121, App |
| 9 | 39.4 | 7.3 | 1959 | US-08-137-175A-1 | Sequence 1, App1 |
| 10 | 39.4 | 7.3 | 1959 | US-08-479-017-1 | Sequence 1, App1 |
| 11 | 39.4 | 7.3 | 5952 | US-08-663-998-2 | Sequence 2, App1 |
| 12 | 38.4 | 7.1 | 3323 | US-08-936-165A-246 | Sequence 246, App |
| 13 | 34.6 | 6.4 | 3465 | US-08-914-999-5 | Sequence 5, App1 |
| 14 | 31.8 | 5.9 | 730 | US-08-858-207A-234 | Sequence 234, App |
| 15 | 31.8 | 5.9 | 1197 | US-09-276-531-85 | Sequence 85, App1 |
| 16 | 31 | 5.7 | 2696 | US-07-961-522-1 | Sequence 1, App1 |
| 17 | 31 | 5.7 | 2696 | US-08-217-438-1 | Sequence 1, App1 |
| 18 | 31 | 5.7 | 2696 | US-08-321-978-1 | Sequence 1, App1 |
| 19 | 31 | 5.7 | 2696 | US-08-710-584-1 | Sequence 1, App1 |
| 20 | 31 | 5.7 | 246240 | US-08-724-394A-20 | Sequence 20, App1 |
| 21 | 31 | 5.7 | 246240 | US-08-724-394A-21 | Sequence 21, App1 |
| 22 | 31 | 5.7 | 246240 | US-08-724-394A-22 | Sequence 22, App1 |
| 23 | 30.8 | 5.7 | 2520 | US-08-450-351-1 | Sequence 1, App1 |
| 24 | 30.8 | 5.7 | 2520 | US-08-450-351-3 | Sequence 3, App1 |
| 25 | 30.8 | 5.7 | 3762 | US-08-772-370A-3 | Sequence 3, App1 |
| 26 | 30.8 | 5.7 | 4042 | US-08-200-232-1 | Sequence 1, App1 |
| 27 | 30.8 | 5.7 | 4042 | PCT-US95-02219-1 | Sequence 1, App1 |

| | | | | | |
|------|------|-----|--------|-------------------|-------------------|
| 28 | 30.8 | 5.7 | 4042 | PCT-US95-02219A-1 | Sequence 1, App1 |
| 29 | 30.8 | 5.7 | 8370 | US-08-468-706-1 | Sequence 1, App1 |
| 30 | 30.6 | 5.6 | 2278 | US-08-258-188-1 | Sequence 1, App1 |
| 31 | 30.6 | 5.6 | 2278 | US-08-258-813-1 | Sequence 1, App1 |
| 32 | 30.6 | 5.6 | 2278 | PCT-US95-0855A-1 | Sequence 1, App1 |
| 33 | 30.6 | 5.6 | 2472 | US-08-743-168B-35 | Sequence 35, App1 |
| 34 | 30.6 | 5.6 | 2472 | US-08-743-168B-37 | Sequence 37, App1 |
| 35 | 30.6 | 5.6 | 3291 | US-09-318-448-12 | Sequence 12, App1 |
| 36 | 30.2 | 5.6 | 939 | US-08-881-189B-1 | Sequence 1, App1 |
| 37 | 30.2 | 5.6 | 994 | US-08-961-083-211 | Sequence 211, App |
| 38 | 30.2 | 5.6 | 1005 | US-08-881-189B-22 | Sequence 22, App1 |
| 39 | 30.2 | 5.6 | 1033 | US-08-961-083-191 | Sequence 191, App |
| 40 | 30.2 | 5.6 | 1283 | US-09-282-305-11 | Sequence 11, App1 |
| C 41 | 30.2 | 5.6 | 152331 | US-09-128-155-16 | Sequence 17, App1 |
| C 42 | 30.2 | 5.6 | 176373 | US-09-128-155-17 | Sequence 3, App1 |
| C 43 | 29.8 | 5.5 | 1903 | US-07-961-522-3 | Sequence 3, App1 |
| 44 | 29.8 | 5.5 | 1903 | US-08-217-438-3 | Sequence 3, App1 |
| 45 | 29.8 | 5.5 | 1903 | US-08-321-978-3 | Sequence 3, App1 |

ALIGNMENTS

```
RESULT 1
: US-07-941-523-21
: Sequence 21, Application US/07941523
: Patent No. 5571718
:
: GENERAL INFORMATION:
: APPLICANT: Dunn, John J
: APPLICANT: Bairdour, Alan G
: TITLE OF INVENTION: Cloning and Expression of Borrella
: TITLE OF INVENTION: Lipoproteins
: NUMBER OF SEQUENCES: 24
: CORRESPONDENCE ADDRESSES:
: ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
: STREET: Two Militia Drive
: CITY: Lexington
: STATE: Massachusetts
: COUNTRY: U.S.A.
: ZIP: 01730
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: PatentIn Release #1.0, Version #1.25
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/07/941,523
: FILING DATE: 19920908
: CLASSIFICATION: 435
: ATTORNEY/AGENT INFORMATION:
: NAME: Granahan, Patricia
: REGISTRATION NUMBER: 32,227
: REFERENCE/DOCKET NUMBER: BNL90-01A
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (617) 861-6240
: TELEFAX: (617) 861-9540
: INFORMATION FOR SEQ ID NO: 21:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 846 base pairs
: TYPE: NUCLEIC ACID
: STRANDEDNESS: double
: TOPOLOGY: linear
: MOLECULE TYPE: DNA (genomic)
:
: US-07-941-523-21
:
: Query Match 7.3%; Score 39.4; DB 1; Length 846;
: Best Local Similarity 48.8%; Pred. No. 0.0051;
: Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;
:
: Oy 33 agctcttcgtattatggcagtgagtcacgcgcacatcagcgtatgcgaattctgctgta 92
: Db 117 AGACTCACTGTCCTTGTGTTAATGCTAATGTAATTTTGTGAAGCAAGAAAAAATAGCTC 176
```


RESULT 4

```
; US-08-235-836C-117
; Sequence 117, Application US/08235836C
; Patent No. 6248562
; GENERAL INFORMATION:
; APPLICANT: Dunn, John J.
; APPLICANT: Luft, Benjamin J.
; TITLE OF INVENTION: No. 6248562el Chimeric Proteins Comprising
; TITLE OF INVENTION: Borrelia Polypeptides and Uses Therefor
; NUMBER OF SEQUENCES: 144
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brookhaven National Laboratory
; STREET:
; CITY: Upton
; STATE: NY
; COUNTRY: USA
; ZIP: 11973
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/235, 836C
; FILING DATE: 29-APR-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,191
; FILING DATE: 01-11-93
; ATTORNEY/AGENT INFORMATION:
; NAME: Bogosian, Margaret C.
; REGISTRATION NUMBER: 25,324
; REFERENCE/DOCKET NUMBER: BNL93-28A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (516) 282-7338
; TELEFAX: (516) 282-3729
; INFORMATION FOR SEQ ID NO: 117:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1141 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..1141
; US-08-235-836C-117
```

```
Query Match 7.3%; Score 39.4; DB 4; Length 1141;
Best Local Similarity 48.8%; Pred. No. 0.0056;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;
```

```
QY 33 agctcttgtaattgagatgagtgctaaagctgcacatgaagctatgcaattctgtga 92
DB 114 AGACTCAGTGTCTTTGTTTAATGTAATAAATTTTGTAAAGCAAAATAATACCTC 173
QY 93 tgcacaacctatgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 152
DB 174 CGGCAATATGATTTAAAGACACAAATTCAGTTGAAGCTTAAAGAACTTCGATTA 233
QY 153 gaacacgcgtatgtatgtatgtatgtatgtatgtatgtatgtatgtatgtatgtat 212
DB 234 AAACAATGTTCTGGAACCCCTTGAAGGTTCAAGCCTGACAAAGATTAAGTAATTAAC 293
QY 213 cgaattgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 249
DB 294 AGTTTCTGCTGATTTAAACACAGTAACCTTAAGAACA 330
```

```
RESULT 5
US-08-235-836C-113
```

```
; Sequence 113, Application US/08235836C
; Patent No. 6248562
; GENERAL INFORMATION:
```

```
; APPLICANT: Dunn, John J.
; APPLICANT: Luft, Benjamin J.
; TITLE OF INVENTION: No. 6248562el Chimeric Proteins Comprising
; TITLE OF INVENTION: Borrelia Polypeptides and Uses Therefor
; NUMBER OF SEQUENCES: 144
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Brookhaven National Laboratory
; STREET:
; CITY: Upton
; STATE: NY
; COUNTRY: USA
; ZIP: 11973
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/235, 836C
; FILING DATE: 29-APR-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,191
; FILING DATE: 01-11-93
; ATTORNEY/AGENT INFORMATION:
; NAME: Bogosian, Margaret C.
; REGISTRATION NUMBER: 25,324
; REFERENCE/DOCKET NUMBER: BNL93-28A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (516) 282-7338
; TELEFAX: (516) 282-3729
; INFORMATION FOR SEQ ID NO: 113:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1180 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..1180
; US-08-235-836C-113
```

```
Query Match 7.3%; Score 39.4; DB 4; Length 1180;
Best Local Similarity 48.8%; Pred. No. 0.0059;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;
```

```
QY 33 agctcttgtaattgagatgagtgctaaagctgcacatgaagctatgcaattctgtga 92
DB 114 AGACTCAGTGTCTTTGTTTAATGTAATAAATTTTGTAAAGCAAAATAATACCTC 173
QY 93 tgcacaacctatgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 152
DB 174 CGGCAATATGATTTAAAGACACAAATTCAGTTGAAGCTTAAAGAACTTCGATTA 233
QY 153 gaacacgcgtatgtatgtatgtatgtatgtatgtatgtatgtatgtatgtatgtat 212
DB 234 AAACAATGTTCTGGAACCCCTTGAAGGTTCAAGCCTGACAAAGATTAAGTAATTAAC 293
QY 213 cgaattgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 249
DB 294 AGTTTCTGCTGATTTAAACACAGTAACCTTAAGAACA 330
```

```
RESULT 6
US-08-235-836C-119
; Sequence 119, Application US/08235836C
; Patent No. 6248562
; GENERAL INFORMATION:
; APPLICANT: Dunn, John J.
```

1 APPLICANT: Luft, Benjamin J.
2 TITLE OF INVENTION: No. 6248662el ChimERIC Proteins Comprising
3 TITLE OF INVENTION: Borrelia Polypeptides and Uses Therefor
4 NUMBER OF SEQUENCES: 144
5 CORRESPONDENCE ADDRESS:
6 ADDRESSEE: Brookhaven National Laboratory
7 STREET:
8 CITY: Upton
9 STATE: NY
10 COUNTRY: USA
11 ZIP: 11973
12
13 COMPUTER READABLE FORM:
14 MEDIUM TYPE: Floppy disk
15 COMPUTER: IBM PC compatible
16 OPERATING SYSTEM: PC-DOS/MS-DOS
17 SOFTWARE: Patent Release #1.0, Version #1.25
18 CURRENT APPLICATION DATA:
19 APPLICATION NUMBER: US/08/235,836C
20 FILING DATE: 29-Apr-1994
21 CLASSIFICATION: 435
22 PRIOR APPLICATION DATA:
23 APPLICATION NUMBER: US 08/148,191
24 FILING DATE: 01-11-93
25 ATTORNEY/AGENT INFORMATION:
26 NAME: Bogoslian, Margaret C.
27 REGISTRATION NUMBER: 25,324
28 REFERENCE/DOCKET NUMBER: BNL93-28A
29 TELECOMMUNICATION INFORMATION:
30 TELEPHONE: (516) 282-7338
31 TELEFAX: (516) 282-3729
32 INFORMATION FOR SEQ ID NO: 119:
33 SEQUENCE CHARACTERISTICS:
34 LENGTH: 1324 base pairs
35 TYPE: nucleic acid
36 STRANDEDNESS: double
37 TOPOLOGY: linear
38 FEATURE:
39 NAME/KEY: CDS
40 LOCATION: 1..1324
41 US-08-235-836C-119

```

Query Match Similarity 7.3%; Score 39.4; DB 4; Length 1324;
Best Local Similarity 48.8%; Pred. No. 0.0062;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;

QY 33 agctcttcctgattgtagcgatgagtcctaacgctgcacacagctatgagcaattcgtcta 92
Db 114 AGACTCAGCGTCTTGTGTTAATGTAATAAATTTTGTGAACCAAGAAAATAATGCGTC 173

QY 93 tgcctaaccctatgttgtgtgcacaatttggtcaatgtagaagcgcaaatcaacggtta 152
Db 174 CGGCAAAATGATGTTTAAAGCAACAACTGATCAGTTGAACCTTAAAGAACTCCGATAA 233

QY 153 gaacacgcctatgtagtattatgatgcaggtatataacttgataccaaatttgcgctagaacc 212
Db 234 AACACATGTTCTGGAACCCCTTGAAGGTTTCACAAAGCCTGACAAAGAGTAAGTAAATTAAC 293

QY 213 cgaatttgttggttcagaagcgccaagaatttaatgca 249
Db 294 AGTTCTGCTGATTTAAACACAGTAACTTAGAACCA 330

RESULT 7
US-08-235-836C-115
; Sequence 115, Application US/08235836C
; Patent No. 6248562
; GENERAL INFORMATION:
; APPLICANT: Dunn, John J.
; APPLICANT: Luft, Benjamin J.
; TITLE OF INVENTION: No. 6248562el Chimeric Proteins Comprising
; TITLE OF INVENTION: Borrelia Polyptides and Uses Therefor
; NUMBER OF SEQUENCES: 144

```

```

CORRESPONDENCE ADDRESS:
ADDRESSEE: Brookhaven National Laboratory
STREET:
CITY: Upton
STATE: NY
COUNTRY: USA
ZIP: 11973
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/235,836C
FILING DATE: 29-APR-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/148,191
FILING DATE: 01-11-93
ATTORNEY/AGENT INFORMATION:
NAME: Bogosian, Margaret C
REGISTRATION NUMBER: 25,324
REFERENCE/DOCKET NUMBER: BNL93-28A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 282-7338
TELEFAX: (516) 282-3729
INFORMATION FOR SEQ ID NO: 115:
SEQUENCE CHARACTERISTICS:
LENGTH: 1363 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
FEATURE:
NAME/KEY: CDS
LOCATION: 1..1363
US-08-235-836C-115

```

```

Query Match      7.3%; Score 39.4; DB 4; Length 1363;
Best Local Similarity 48.8%; Pred. No. 0.0063;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;

QY      33 agctcttcgattatgagcgtatgagctcaacgctgcatacagctatgagcaattctgcgtca 92
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Dd      114 AGACCTCACTGTCCTTTGTTTAATAGTAATAAATTTTGTGTAACCAAGAAAAAATAAGCTC 173
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY      93 tgcctaacccctatgtctggctgcacaaatctgctcaagtacgacgcaacgaatcaacggttaa 152
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Dd      174 CGGCAAAATATGATTTAAAGACGACAACTTGATGAGTTGAACCTTAAANGAAGACTCCGATTA 233
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY      153 gaacacgcctatgattatcatcaggtatataactcttgaccaaaatttggcgtgaacc 212
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Dd      234 AAACCAATGGTTCTGGAAACCTTGTAAGGTTCCAAAGCCTGCAGAGTAAGTAATAATTAAAC 293
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY      213 cgaattgttggttcagacgcgcaagaattatcatca 249
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Dd      294 AGTTTCTGCTGATTTAAACACAGTAACCTTAGAAGCA 330
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT      8
US-08-235-836C-121
; Sequence 121, Application US/08235836C
; Patent No. 6248562
; GENERAL INFORMATION:
; APPLICANT: Dunn, John J.
; APPLICANT: Luft, Benjamin J.
; TITLE OF INVENTION: No. 6248562el Chimeric Proteins Comprising
; TITLE OF INVENTION: Borrella Polypeptides and Uses Therefor
; NUMBER OF SEQUENCES: 144
; CORRESPONDENCE ADDRESS:
; ADDRESS: Brookhaven National Laboratory
; STREET:
; CITY: Upton
;

```

```

; STATE: NY
; COUNTRY: USA
; ZIP: 11973
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/235,836C
; FILING DATE: 29-Apr-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,191
; FILING DATE: 01-11-93
; ATTORNEY/AGENT INFORMATION:
; NAME: Bogosian, Margaret C.
; REGISTRATION NUMBER: 25,324
; REFERENCE/DOCKET NUMBER: BNL93-28A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (516) 282-7338
; TELEFAX: (516) 282-3729
; INFORMATION FOR SEQ ID NO: 121:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1765 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..1765
; US-08-235-836C-121

```

```

Query Match          7.3%; Score 39.4; DB 4; Length 1765;
Best Local Similarity 48.8%; Pred. No. 0.0071;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;

```

```

QY 33 agctcttgcttattgctgagtgagtgtaacgctgcataagctatgcaattctgctga 92
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 114 AGACTCAGTGTCTTTGTTTAAATGTAATAAATTTTGTAGCAAGAAAAAATAGCTC 173
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 93 tgcacaacctatgctgagtgcaaaatggtcaagtagacgcgaagaacaatcaacggtaa 152
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 174 CGGCAAAATATGATTAAAGACAAATATGATCAGGTGAACTTAAAGAACTTCGGATAA 233
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 153 gaacacgcgttatgctattatgcaggtataaacttgaccaaatttggcgtagaacc 212
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 234 AAACAATGTTCTGGAACCTTGAAAGCTTCAAGCCTGACAGAGTAAGTAATAATTAAAC 293
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 213 cgaattgttgctgagcagcccaagaattatgca 249
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 294 AGTTCTGCTGATTTAAACACAGTAACCTTAAAGACA 330
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

```

```

RESULT 9
US-08-137-175A-1
; Sequence 1, Application US/08137175A
; Patent No. 5777095
; GENERAL INFORMATION:
; APPLICANT: BARBOUR, Alan G.
; APPLICANT: BERGSTROM, Sven
; APPLICANT: HANSSON, Lennart
; TITLE OF INVENTION: IMPROVEMENT IN BORRELIA BURGDOFFERI AND
; TITLE OF INVENTION: PROPHYLAXIS
; NUMBER OF SEQUENCES: 22
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BROWDY AND NEIMARK
; STREET: 419 Seventh Street, N.W., Suite 300
; City: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20004

```

```

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/137,175A
; FILING DATE: 26-Oct-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US92/08972
; FILING DATE: 22-Oct-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: COOPER, Iver P.
; REGISTRATION NUMBER: 28,005
; REFERENCE/DOCKET NUMBER: BARBOUR-1B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-628-5197
; TELEFAX: 202-737-3528
; TELEX: 248633
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1959 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; ORIGINAL SOURCE:
; ORGANISM: Borrelia burgdorferi
; STRAIN: B31 (ATCC 35210)
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: 123..142
; OTHER INFORMATION: /function= "Primer"
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: 584..607
; OTHER INFORMATION: /function= "Primer"
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: 776..794
; OTHER INFORMATION: /function= "Primer"
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: 806..817
; OTHER INFORMATION: /function= "Primer"
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 119..940
; OTHER INFORMATION: /product= "Ospa"
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 950..1840
; OTHER INFORMATION: /product= "Ospb"
; US-08-137-175A-1

```

```

Query Match          7.3%; Score 39.4; DB 1; Length 1959;
Best Local Similarity 48.8%; Pred. No. 0.0074;
Matches 106; Conservative 0; Mismatches 111; Indels 0; Gaps 0;

```

```

QY 33 agctcttgcttattgctgagtgagtgtaacgctgcataagctatgcaattctgctga 92
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1111 AGACTCAGTGTCTTTGTTTAAATGTAATAAATTTTGTAGCAAGAAAAAATAGCTC 1170
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 93 tgcacaacctatgctgagtgcaaaatggtcaagtagacgcgaagaacaatcaacggtaa 152
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1171 CGGCAAAATATGATTAAAGACAAATATGATCAGGTGAACTTAAAGAACTTCGGATAA 1230
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 153 gaacacgcgttatgctattatgcaggtataaacttgaccaaatttggcgtagaacc 212
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 1231 AAACAATGTTCTGGAACCTTGAAAGCTTCAAGCCTGACAGAGTAAGTAATAATTAAAC 1290
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

```



```

QY 76 tatgcaattctgtatgtcaaccctatgttggcgccaaatltgtcaagtagacgcc 135
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 260 AGAGCCACATTCYTTTATGGAATAATTAGTTGTGCAAAAGTAATTGCGCTCTTGCC 319
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY 136 aagcaatcaacggtagaacac 158
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 320 ATTAAGTAAAGCAAAACCCAC 342
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |

```

Search completed: August 8, 2002, 19:10:31
 Job time: 3969 sec

THIS PAGE BLANK (USPTO)

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: August 8, 2002, 19:09:07 ; Search time 339.65 Seconds

(Without alignments)
3734.846 Million cell updates/sec

Title: US-09-164-714-6

Sequence: 1 atgaaacttaaaact.....gcgtcattggttttaa 543

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 1406282 seqs, 1168085023 residues

Total number of hits satisfying chosen parameters: 2812564

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database :

Pending_Patents_NA_New.*
1: /cgn2_6/pdata1/pna/PCT_NEW_COMB.seq.*
2: /cgn2_6/pdata1/pna/US06_NEW_COMB.seq.*
3: /cgn2_6/pdata1/pna/US07_NEW_COMB.seq.*
4: /cgn2_6/pdata1/pna/US08_NEW_COMB.seq.*
5: /cgn2_6/pdata1/pna/US09_NEW_COMB.seq.*
6: /cgn2_6/pdata1/pna/US10_NEW_COMB.seq.*
7: /cgn2_6/pdata1/pna/US10_NEW_COMB.seq.*
8: /cgn2_6/pdata1/pna/US60_NEW_COMB.seq.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|----------------------|
| 1 | 53.8 | 9.9 | 10251 | 1 | PCT-US02-12405-582 |
| 2 | 53.8 | 9.9 | 10251 | 7 | US-10-045-674-582 |
| 3 | 49.8 | 9.2 | 1355 | 1 | PCT-US02-12405-593 |
| 4 | 49.8 | 9.2 | 1355 | 7 | US-10-045-674-593 |
| 5 | 35.8 | 6.6 | 8201 | 5 | US-09-958-617A-17 |
| 6 | 35 | 6.4 | 19446 | 7 | US-10-158-844-51 |
| 7 | 34.6 | 6.4 | 1349 | 5 | US-09-895-913A-135 |
| 8 | 34.6 | 6.4 | 2284 | 5 | US-09-886-492-18859 |
| 9 | 34 | 6.3 | 1098 | 5 | US-09-718-803A-6 |
| 10 | 33.8 | 6.2 | 1018 | 5 | US-09-919-002-11013 |
| 11 | 33.8 | 6.2 | 1500 | 7 | US-10-179-131-4849 |
| 12 | 33.8 | 6.2 | 1887 | 7 | US-10-179-131-2632 |
| 13 | 33.8 | 6.2 | 3024 | 1 | PCT-US02-16234-63 |
| 14 | 33.8 | 6.2 | 3060 | 1 | PCT-US02-16234-48 |
| 15 | 33.4 | 6.2 | 4657 | 5 | US-09-886-492-17610 |
| 16 | 33.4 | 6.2 | 128779 | 6 | US-10-081-327A-38 |
| 17 | 33.2 | 6.1 | 2760 | 5 | US-09-789-161A-13 |
| 18 | 32.8 | 6.0 | 273 | 7 | US-10-179-131-3697 |
| 19 | 32.8 | 6.0 | 523 | 7 | US-10-027-632-105035 |
| 20 | 32.8 | 6.0 | 663 | 7 | US-10-027-632-13767 |
| 21 | 32.8 | 6.0 | 3441 | 7 | US-10-179-131-709 |
| 22 | 32.6 | 6.0 | 2967 | 7 | US-10-179-131-1639 |
| 23 | 32.4 | 6.0 | 15462 | 7 | US-10-105-299-11940 |
| 24 | 32.2 | 5.9 | 776 | 7 | US-10-027-632-150729 |
| 25 | 32.2 | 5.9 | 2277 | 7 | US-10-179-131-1144 |

| | | | | | | |
|----|------|-----|---------|---|----------------------|-------------------|
| 26 | 32.2 | 5.9 | 2546 | 7 | US-10-137-036-95 | Sequence 95, App1 |
| 27 | 32.2 | 5.9 | 3264 | 7 | US-10-179-131-3211 | Sequence 3211, Ap |
| 28 | 32 | 5.9 | 552 | 5 | US-09-918-995-32542 | Sequence 32542, A |
| 29 | 32 | 5.9 | 1440 | 7 | US-10-179-131-4958 | Sequence 4958, Ap |
| 30 | 32 | 5.9 | 3910 | 7 | US-10-138-838-91 | Sequence 91, App1 |
| 31 | 32 | 5.9 | 3910 | 7 | US-10-138-898-91 | Sequence 91, App1 |
| 32 | 32 | 5.9 | 3910 | 7 | US-10-138-905-91 | Sequence 91, App1 |
| 33 | 32 | 5.9 | 3910 | 7 | US-10-139-031-91 | Sequence 91, App1 |
| 34 | 32 | 5.9 | 3910 | 7 | US-10-139-218-91 | Sequence 91, App1 |
| 35 | 32 | 5.9 | 3910 | 7 | US-10-139-236-91 | Sequence 91, App1 |
| 36 | 32 | 5.9 | 3910 | 7 | US-10-138-916-91 | Sequence 91, App1 |
| 37 | 31.8 | 5.9 | 638 | 7 | US-10-027-632-228788 | Sequence 228788, |
| 38 | 31.8 | 5.9 | 1503841 | 5 | US-09-946-807-1 | Sequence 1, App11 |
| 39 | 31.6 | 5.8 | 873 | 7 | US-10-179-131-4579 | Sequence 4579, Ap |
| 40 | 31.6 | 5.8 | 4143 | 8 | US-60-360-039-25104 | Sequence 25104, A |
| 41 | 31.4 | 5.8 | 1070 | 7 | US-10-027-632-121833 | Sequence 121833, |
| 42 | 31.4 | 5.8 | 1070 | 7 | US-10-027-632-121834 | Sequence 121834, |
| 43 | 31.4 | 5.8 | 1070 | 7 | US-10-027-632-121835 | Sequence 121835, |
| 44 | 31.4 | 5.8 | 1776 | 7 | US-10-179-131-4130 | Sequence 4130, Ap |
| 45 | 31.4 | 5.8 | 2676 | 5 | US-09-935-625-24887 | Sequence 24887, A |

ALIGNMENTS

RESULT 1
PCT-US02-12405-582
Sequence 582, Application PC/TUS0212405
GENERAL INFORMATION:
APPLICANT: LADNER, ROBERT C.
APPLICANT: COHEN, EDWARD H.
APPLICANT: NASTRI, HORACIO G.
APPLICANT: ROOKEY, KRISTIN L.
APPLICANT: HOET, RENE
APPLICANT: HODGENBOOD, HENDRICUS R. J. M.
TITLE OF INVENTION: NOVEL METHODS OF CONSTRUCTING LIBRARIES COMPRISING
TITLE OF INVENTION: DISPLAYED AND/OR EXPRESSED MEMBERS OF A DIVERSE FAMILY
TITLE OF INVENTION: OF PEPTIDES, POLYPEPTIDES OR PROTEINS AND THE NOVEL
FILE REFERENCE: DYAX/002 CIP2
CURRENT APPLICATION NUMBER: PCT/US02/12405
CURRENT FILING DATE: 2002-04-17
PRIOR APPLICATION NUMBER: 06/198,069
PRIOR FILING DATE: 2000-04-17
PRIOR APPLICATION NUMBER: 09/837,306
PRIOR FILING DATE: 2001-04-17
NUMBER OF SEQ ID NOS: 635
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 582
LENGTH: 10251
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Cjra05
FEATURE:
OTHER INFORMATION: nucleotide sequence
NAME/KEY: CDS
LOCATION: (1578)..(1916)
FEATURE:
NAME/KEY: CDS
LOCATION: (2388)..(2843)
FEATURE:
NAME/KEY: CDS
LOCATION: (2849)..(2893)
FEATURE:
NAME/KEY: CDS
LOCATION: (3189)..(4232)
FEATURE:
NAME/KEY: CDS
LOCATION: (7418)..(8119)
FEATURE:
NAME/KEY: CDS
LOCATION: (8160)..(9452)


```

1  RESULT 4
2  US-10-045-674-593
3  ; Sequence 593, Application US/10045674
4  ; GENERAL INFORMATION:
5  ; APPLICANT: LADNER, ROBERT C.
6  ; APPLICANT: COHEN, EDWARD H.
7  ; APPLICANT: NASTRI, HORACIO G.
8  ; APPLICANT: ROOKEY, KRISTIN L.
9  ; APPLICANT: HOET, RENE
10 ; APPLICANT: HOOGENBOOM, HENDRICUS R. J. M.
11 ; TITLE OF INVENTION: NOVEL METHODS OF CONSTRUCTING LIBRARIES COMPRISING
12 ; TITLE OF INVENTION: DISPLAYED AND/OR EXPRESSED MEMBERS OF A DIVERSE FAMILY
13 ; TITLE OF INVENTION: OF PEPTIDES, POLYPEPTIDES OR PROTEINS AND THE NOVEL
14 ; TITLE OF INVENTION: LIBRARIES
15 ; FILE REFERENCE: DYAX/002 CIP2
16 ; CURRENT APPLICATION NUMBER: US/10/045,674
17 ; CURRENT FILING DATE: 2001-10-25
18 ; PRIOR APPLICATION NUMBER: 60/198,069
19 ; PRIOR FILING DATE: 2000-04-17
20 ; PRIOR APPLICATION NUMBER: 09/837,306
21 ; PRIOR FILING DATE: 2001-04-17
22 ; NUMBER OF SEQ ID NOS: 635

```

```

? RESULT      5
? US-09-958-617A-17
? Sequence 17, Application US/09958617A
? GENERAL INFORMATION:
? APPLICANT: Fisher et al., Larry
? TITLE OF INVENTION: Complex Formed by Small Integrin-Binding Ligand,
? TITLE OF INVENTION: N-Linked Glycoproteins (SIBLINGS) and Factor H
? FILE REFERENCE: 54101
? CURRENT APPLICATION NUMBER: US/09/958,617A
? CURRENT FILING DATE: 2002-04-02
? PRIOR APPLICATION NUMBER: 60/128,468
? PRIOR FILING DATE: 1999-04-09
? NUMBER OF SEQ ID NOS: 18
? SOFTWARE: PatentIn Ver. 2.1
? SEQ ID NO 17
? LENGTH: 8201
? TYPE: DNA
? ORGANISM: Homo sapiens
? FEATURE:
? NAME/KEY: exon
? LOCATION: (2387)..(2437)
? FEATURE:
? NAME/KEY: exon
? LOCATION: (3577)..(3660)
? FEATURE:
? NAME/KEY: exon

```

```

; LOCATION: (3794)..(4780)
; FEATURE:
; NAME/KEY: exon
; LOCATION: (5257)..(7896)
;
US-09-958-617A-17

```

| | | | | |
|---------------------------|--------|-----------------|-----------|--------------|
| Query Match | 6.6%; | Score 35.8; | DB 5; | Length 8201; |
| Best Local Similarity | 47.9%; | Pred. NO. 2.4; | | |
| Matches 103; Conservative | 0; | Mismatches 112; | Indels 0; | Gaps 0; |

| | | | | | | |
|----|------|------------------|---------------------|---------------------|----------------|------|
| QY | 227 | cagcgccgaagaagat | taatgycagcggtgac | tcctctctaaagtgatctg | agctctttg | 286 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Db | 3957 | caaacggaaggggga | tatatcttgaggtctg | aatggygacacaggaag | gcagaacaatg | 4016 |
| | | | | | | |
| QY | 287 | gtgcttatgcaata | tcgctataacttcatcaat | cccatcttata | tccaaagggcaat | 346 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Db | 4017 | gtcatgtgtgatat | catatcgtggaagaagaa | catcatcagcaatg | catccaggatacag | 4076 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| QY | 347 | taggcattgctaa | gaactaaagtaagatg | taccagcccgtaatg | caactacatactca | 406 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Db | 4077 | taagcatcatctg | caatgctcgtgagcca | acaacagaaagca | catcactaagtga | 4136 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| QY | 407 | aaagcgcaaaa | ccagcgtctgacg | ggggtgttgc | 441 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Db | 4137 | agaaatacccaaa | atgaggatgcttgagatg | cagaggt | 4171 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

RESULT 6
US-10-158-844-51
; Sequence 51, Application US/10158844
CHURCH & DWIGHT

APPLICANT: Kunsch et al.
TITLE OF INVENTION: Streptococcus pneumoniae Polynucleotides and Sequences
NUMBER OF SEQUENCES: 391
CORRESPONDENCE ADDRESS:

ADDRESS: Human Genome Sciences, Inc
STREET: 9410 Key West Avenue
CITY: Rockville
STATE: Maryland
COUNTRY: USA

COMPUTER READABLE FORM:
MEDIUM TYPE: CD-R
COMPUTER: Dell Latitude Pentium 3
OPERATING SYSTEM: Windows 98

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/158,844
FILING DATE: 03-Jun-2002
CLASSIFICATION: <Unknown>

APPLICATION NUMBER: US 08/961,527
FILING DATE: 1997-10-30
APPLICATION NUMBER: US 60/029,960
FILING DATE: 1996-10-31

NAME: Hyman, Mark J.
REGISTRATION NUMBER: 46,789
REFERENCE/DOCKET NUMBER: PB340PID1
RMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:

LENGTH: 19446 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
SEQUENCE DESCRIPTION: CNO ID

| SEQUENCE DESCRIPTION: | SEQ ID NO: | 51: |
|-----------------------|------------|-----|
| US-10-158-844-51 | | |

| | | | | |
|-----------------------|--------|----------------|--------|----------------|
| Query Match | 6.48; | Score 35; | DB 7; | Length 19446; |
| Best Local Similarity | 49.28; | Pred. No. 5.5; | | |
| Matches | 92; | Conservative | 0; | Mismatches 95; |
| | | | Indels | 0; |
| | | | Gaps | 0 |

| | | | |
|----|-------|---|-------|
| QY | 105 | tgtyggtgcacaaatctgtgcagtagagccgaagaatcgaagtglaagaacacgcctta | 164 |
| | | | |
| Db | 18487 | TATTCCTCTTTTGGACTAGTGGTGAGACGCCCTTGCTATGACGCTGCCATCCGTGCAGT | 18546 |
| QY | 165 | tgatattatgcaggtlataacttgcagccaaatttgcgttagaacccgaattgttcgg | 224 |
| | | | |
| Db | 18547 | TGTTGCTCAGCAAAATTCGAAAGCAATGCAAGTTTGTGGTATCTATGACGGAATATGCTGG | 18606 |
| QY | 225 | ttcagagcccaagaatttaattatgcagcgctgaagtcctgtlaaagatgatatgtaagcttt | 284 |
| | | | |
| Db | 18607 | TATGTTGTCGCCGTGAATTCATCCCTAGATGACACCTTCAGTAGGGGACATCATTTTCTCG | 18666 |
| QY | 285 | tgatgctc 291 | |
| | | | |
| Db | 18667 | TGGTGCT 18673 | |

RESULT 7
US-09-895-913A-135
; Sequence 135, Application US/09895913A
; Current Information

```

; APPLICANT: Kleanthous, Harold
; APPLICANT: Al-Garawi, Amal
; APPLICANT: Miller, Charles
; APPLICANT: Tomb, Jean Francois

```

```

: TITLE OF INVENTION: Identification of polynucleotides
: TITLE OF INVENTION: Encoding Novel Helicobacter Polypeptides in the Helicobacter
: TITLE OF INVENTION: Genome
: FILE REFERENCE: 06132/043002

```

```

; CURRENT FILING DATE: 2001-06-29
; PRIOR APPLICATION NUMBER: US 08/881,227
; PRIOR FILING DATE: 1997-06-24
; NUMBER OF SEQ ID NOS: 368

```

```

; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 135
; LENGTH: 1349
; TYPE: DNA
; ORGANISM: Helicobacter pylori

```

```

; NAME/KEY: CDS
; LOCATION: (78) ... (1298)
US-09-895-913A-135

```

| | | | | |
|-----------------------|-----------------|-----------------|-----------|--------------|
| Query Match | 6.48; | Score 34.6; | DB 5; | length 1349; |
| Best Local Similarity | 48.38; | Pred. No. 3; | | |
| Matches 97; | Conservative 0; | Mismatches 104; | Indels 0; | Gaps 0; |

| | | | |
|----|-----|---|-----|
| Qy | 77 | atggcaattctgcgtgagtgatcaacctatgcttggtgccaattggtgccaagttaagtaaccca | 136 |
| | | | |
| Db | 118 | atggcaataacccgctagttcttaacgctttaagaacagcgctcaaatgatgcatcgacgcct | 177 |
| | | | |
| Qy | 137 | agcaaatcaacgaagtgaagacacgccttatggtatctatgcaagttacacttgaccanaa | 166 |
| | | | |
| Db | 178 | atccctatcaaccccatcaacgcgccattgycgaataattatgctctgcttttaagataatgct | 237 |
| | | | |
| Qy | 197 | atttgtagctgaagaacccgaatttcttggttcaagacgcccaagaatttaattgacagcgtga | 256 |
| | | | |
| Db | 238 | atgttgtagtgcgaattctgcttttaagtgtgaatctgagcatgccgcacatgagcgatgcgttg | 297 |
| | | | |
| Qy | 257 | gtccctgtataaagtgtagtgta | 277 |
| | | | |
| Db | 298 | gagctgcccgcagcctggaaggga | 318 |
| | | | |

RESULT 8
US-09-886-492-1885/C
; Sequence 18859, Application US/09886492
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Tilka

```

? TITLE OF INVENTION: Polynucleotides, Polypeptides Expressed
? TITLE OF INVENTION: by the Polynucleotides and Methods for Their Use
? FILE REFERENCE: 11000.1009c2
? CURRENT APPLICATION NUMBER: US/09/886,492
? CURRENT FILING DATE: 2001-06-20
? PRIOR APPLICATION NUMBER: 09/867,716
? PRIOR FILING DATE: 2001-05-29
? PRIOR APPLICATION NUMBER: 09/215,179
? PRIOR FILING DATE: 1998-12-17
? NUMBER OF SEQ ID NOS: 19860
? SOFTWARE: FastSeq for Windows Version 4.0
? SEQ ID NO 18859
? LENGTH: 2284
? TYPE: DNA
? ORGANISM: Pinus radiata
? FEATURE:
? NAME/KEY: misc.feature
? LOCATION: (1)..(2284)
? OTHER INFORMATION: n = A,T,C or G
US-09-886-492-18859

```

[illegible]

```

RESULT 9
US-09-718-803A-6/c
; Sequence 6, Application US/09718803A
; GENERAL INFORMATION:
; APPLICANT: SHEPPARD, PAUL O.
; APPLICANT: JASPERS, THERESA R.
; APPLICANT: DEISHER, THERESA A.
; APPLICANT: BISHOP, PAUL D.
; TITLE OF INVENTION: METHOD OF FORMING A PEPTIDE-RECEPTOR
; TITLE OF INVENTION: COMPLEX WITH ZS1G33
; FILE REFERENCE: 99-62
; CURRENT APPLICATION NUMBER: US/09/718-803A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 60/166,765
; PRIOR FILING DATE: 1999-11-22
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 1098
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: degenerate sequence
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(1098)
; OTHER INFORMATION: n - A,T,C or G
US-09-718-803A-6

```

| | | | | |
|-----------------------|------------------|----------------|-----------|--------------|
| Query Match | 6.38; | Score 34; | DB 5; | Length 1098; |
| Best Local Similarity | 30.68; | Pred. No. 4.3; | | |
| Matches 48; | Conservative 27; | Mismatches 82; | Indels 0; | Gaps 0 |

[illegible]

```

RESULT 10
US-09-919-002-11013
; Sequence 11013, Application US/099199002
; GENERAL INFORMATION:
; APPLICANT: Leshkowitz, Dena
; APPLICANT: Liu, Jin
; TITLE OF INVENTION: NOVEL CONTIGS OBTAINED FROM VARIOUS CDNA
; TITLE OF INVENTION: LIBRARIES
; FILE REFERENCE: 20411-752CON1
; CURRENT APPLICATION NUMBER: US/09/919,002
; CURRENT FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: 09/359,922
; PRIOR FILING DATE: FILING DATE: 1999-07-22
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 09/034,341
; PRIOR FILING DATE: FILING DATE: 1998-02-13
; NUMBER OF SEQ ID NOS: 13203
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 11013
; LENGTH: 1018
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-919-002-11013

```

| Query Match | 6.2% | Score 33.8; | DB 5; | Length 1018; |
|-----------------------|--|----------------|-------|----------------------------------|
| Best Local Similarity | 51.7%; | Prod. No. 4.8; | | |
| Matches | 77; | Conservative | 0; | Mismatches 72; Indels 0; Gaps 0; |
| Oy | 6 aacttaaaacacattcgcagatacagcttcctgattcggcagatgagtcacgc | 65 | | |
| | | | | |
| Db | 196 aacttcaacagagagcctttactctcagctctgcgattatgggtttgaacttaca | 255 | | |
| Oy | 66 tgcacagcgtatcggcaattctcgtatgctcaaccctatgtttgctgccaatattgata | 125 | | |
| | | | | |
| Db | 256 gttatctctcagcgtcgttgcattatgcacagccaagatctgaagaataacttgaca | 315 | | |
| Oy | 126 agtagagcccaagcaaatcaacggtcaaga | 154 | | |
| | | | | |
| Db | 316 agcagaccactcgtatgaaagcgagaa | 344 | | |

```

RESULT 11
US-10-179-131-4849
: Sequence 4849, Application US/10179131
: GENERAL INFORMATION:
: APPLICANT: HARE, ROBERTA S.
: APPLICANT: SHAW, KAREN J.
: APPLICANT: SHIMER JR., GEORGE H.
: APPLICANT: KESSLER, MARCO
: APPLICANT: NOLLING, JORK
: APPLICANT: ZENG, QIANDONG
: APPLICANT: GREENE, JONATHAN R.
: TITLE OF INVENTION: CANDIDA ALBICANS NUCLEIC ACIDS AND POLYPEPTIDES
: FILE OF INVENTION: AND USES THEREFOR
: FILE REFERENCE: 2976-4031
: CURRENT APPLICATION NUMBER: US/10/179, 131
: CURRENT FILING DATE: 2002-06-21
: NUMBER OF SEQ ID NOS: 10194
: SEQ ID NO 4849
:
: LENGTH: 1500

```



```
RESULT 14
PCT-US02-16234-48
; Sequence 48, Application PC/TUS0216234
; GENERAL INFORMATION:
; APPLICANT: INCYTE GENOMICS, INC.
; APPLICANT: YUE, Henry
; APPLICANT: LEE, Ernestine A.
; APPLICANT: BECHA, Shanya D.
; APPLICANT: BAUGHN, Mariah R.
; APPLICANT: YAO, Monique G.
; APPLICANT: TANG, Y. Tom
; APPLICANT: AU-YOUNG, Janice K.
; APPLICANT: LAL, Preeti G.
; APPLICANT: WARREN, Bridget A.
; APPLICANT: DUGGAN, Brendan M.
; APPLICANT: TRAN, Uyen K.
; APPLICANT: XU, Yumling
; APPLICANT: THANGAVELU, Kavitha
; APPLICANT: RICHARDSON, Thomas W.
; APPLICANT: BANDMAN, Olga
; APPLICANT: JONES, Karen Anne
; APPLICANT: YANG, Junming
; APPLICANT: EMERLING, Brooke M.
; APPLICANT: SWARNAKAR, Anita
; APPLICANT: LEO, Wen
; APPLICANT: WALIA, Narinder K.
; APPLICANT: ALIMZAI, Yalda
; APPLICANT: KHAN, Farrah A.
; APPLICANT: LU, Dyung Alina M.
; APPLICANT: GRIFFIN, Jennifer A.
; APPLICANT: LEE, Soo Yeun
; APPLICANT: BURFORD, Neil
; APPLICANT: ELLIOTT, Vicki S.
; APPLICANT: HONCHELL, Cynthia D.
; APPLICANT: HE, Ann
; APPLICANT: MASON, Patricia M.
; APPLICANT: LI, Joana X.
; APPLICANT: HAFALIA, April J.A.
; APPLICANT: GURURAJAN, Rajagopal
; TITLE OF INVENTION: SECRETED PROTEINS
; FILE REFERENCE: PF-0998 PCT
; CURRENT APPLICATION NUMBER: PCT/US02/16234
; CURRENT FILING DATE: 2002-05-21
; PRIOR APPLICATION NUMBER: 60/293,728; 60/297,019; 60/299,297; 60/300,537; 60/301,936;
; 60/362,439; 60/363,649; 60/366,041
; PRIOR FILING DATE: 2001-05-25; 2001-06-08; 2001-06-19; 2001-06-22; 2001-06-29;
; 2002-03-06; 2002-03-08; 2002-03-19
; NUMBER OF SEQ ID NOS: 64
; SOFTWARE: PERL Program
; SEQ ID NO 48
; LENGTH: 3060
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No: 2726954CBI
PCT-US02-16234-48
```

```
Query Match 6.2%; Score 33.8; DB 1; Length 3060;
Best Local Similarity 51.7%; Pred. No. 6.9;
Matches 77; Conservative 0; Mismatches 72; Indels 0; Gaps 0;

QY 6 aactttaaacactatgagcagatcagcttcgtattgagcagtgactaacgc 65
    ||||| || | | | | ||||| |||| | |||
Db 280 aacttcaacagagccttaccctcagcttgctgattgggtttgaacttaca 339

QY 66 tgcatacagctatgcaattctgctgatagtcacaacctatgtgtgccaattgttca 125
    | || | | | | | | | | | | | | | | | | | | | | |
Db 340 ggttatcctcagcgtctgtgtgtccacagccaagttgaagaatacttgaaca 399

QY 126 agtagacgccaagcaatacaggtgaaga 154
```

```
Db 400 agcagactacctgtatgaagcgaggaaa 428

RESULT 15
US-09-886-492-17610/c
; Sequence 17610, Application US/09886492
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilka
; TITLE OF INVENTION: Polynucleotides, Polypeptides Expressed
; FILE REFERENCE: 11000.1009c2
; CURRENT APPLICATION NUMBER: US/09/886,492
; CURRENT FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: 09/867,716
; PRIOR FILING DATE: 2001-05-29
; PRIOR APPLICATION NUMBER: 09/215,179
; PRIOR FILING DATE: 1998-12-17
; NUMBER OF SEQ ID NOS: 19860
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17610
; LENGTH: 467
; TYPE: DNA
; ORGANISM: Pinus radiata
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(467)
; OTHER INFORMATION: n = A,T,C or G
US-09-886-492-17610
```

```
Query Match 6.2%; Score 33.4; DB 5; Length 467;
Best Local Similarity 54.7%; Pred. No. 4.9;
Matches 64; Conservative 0; Mismatches 53; Indels 0; Gaps 0;

QY 241 tttaagcagcgatgagctcgttaaagtgatgaaagtcttctgtgcttatggcaca 300
    ||| | | | | | | | | | | | | | | | | | | | | |
Db 392 ttgcagatgagatgtttggcccgcaaatgatgatgatcattatcgtattatcattt 333

QY 301 tatgcataacttcaatcaataaccatlttatgccaagggcaaataggcatgct 357
    | | | | | | | | | | | | | | | | | | | | | |
Db 332 ttgcccttttaattttaccagtccttcagttgtctmcaagactacgtatttctnct 276
```

Search completed: August 8, 2002, 20:13:48
Job time: 3881 sec

Db 59 GYRNFETTYGFGGQYQLINDNGELAELGYDDFGRAKLTREAGCPKAKH--TNNGALISL 116

QY 99 -GYRYNFINTPFYAKCKGLIAKTKVD--VTSNRATTSNKSQDKTSLAGS--VGYGFK 151

Db 117 KGSE--VLDGDLYYKAGVALYRSDYKRYEDANGIRHDKKGRHTPARAGSLAVGAETYA 173

QY 152 PLANVGYEASINYLIS 166

Db 174 VLPELAVRLEQYWL 188

RESULT 2

```

Sequence 2, Application US/08467722A
Patent No. 6030626
GENERAL INFORMATION:
APPLICANT: Kolattukudy, P. E.
TITLE OF INVENTION: Otitis Media Vaccine
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESSES:
ADDRESS: Calfee, Halter and Griswold
STREET: Suite 1800 800 Superior Avenue
CITY: Cleveland
STATE: Ohio
COUNTRY: U.S.A>
ZIP: 44114-2688
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/467,722A
FILING DATE:
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Gollick, Mary E.
REGISTRATION NUMBER: 34,829
REFERENCE/DOCKET NUMBER: 22727/00102
TELECOMMUNICATION INFORMATION:
TELEPHONE: (216) 622-8458
TELEFAX: (216) 241-0816
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-467-722A-2

```

| | | | | |
|-----------------------|-------|------------------|------|-----------------------------------|
| Query Match | 12.4% | Score 113 | DB 3 | Length 359 |
| Best Local Similarity | 28.2% | Pred. No. 0.0002 | | |
| Matches | 55 | Conservative | 18 | Mismatches 80; Indels 42; Gaps 11 |

| | | | | |
|----|-----|--|-------------------------------|-----|
| QY | 5 | KTLTAAVASSSLTAAANAAISTYGSADAPYVAKIQ--- | VPAAKIQ----- | 50 |
| | | : : : : : | : : : : : | |
| Db | 3 | KTALALVYAGTAAASVQAAPQENTF---- | YAGYKAGQGSFHGIINNNGAIKKGSSSNT | 58 |
| QY | 51 | ---KNT--AYGIYAGYNF--DQNFGEAEFVGS--- | AKENAGVSPYKGVKSHGA--- | 98 |
| | | : : : : : | : : : : : | |
| Db | 59 | GYRNTFTYGVFGSYQLNDQNFLEALDELQYDDPGRKKL | EAQKPRKKH--TTHNGATLSL | 116 |
| QY | 99 | -GYRYRNFINTPYAKRKLGIATAKTVD-- | VTSRNATYTNKSKDSKYSLAGS-- | 151 |
| | | : : : : : | : : : : : | |
| Db | 117 | KGSYE---VLIDGLDLYDGKAGVALRSDYKFEYEDANG | TRDHKKGHTHARASGLFAVGAEYA | 173 |
| QY | 152 | PLANVGEASYNLYS | 166 | |
| Db | 174 | VLPELAVRLEEQWLT | 188 | |

RESULT 3

US-08-096-181A-8
Sequence 8, Application US/08096181A
Patent No. 6153406
GENERAL INFORMATION:
APPLICANT: Tai, Joseph Y.
APPLICANT: Pullen, Jeffrey K.
APPLICANT: Soper, Thomas S.
APPLICANT: Liang, Shu-Mei
TITLE OF INVENTION: A Method For The High Level Expression,
TITLE OF INVENTION: Purification And Refolding of The Outer, Membrane Protein
TITLE OF INVENTION: P2 From Haemophilus Influenzae Type b
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox
STREET: 1100 New York Avenue, Suite 600
City: Washington

COUNT: 200

```

? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? COMPUTER: IBM pc compatible
? OPERATING SYSTEM: PC-DOS/MS-DOS
? SOFTWARE: Patent In Release #1.0, Version #1.25
?
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/096,181A
? FILING DATE: 23-Jul-1993
? CLASSIFICATION: 424
? TELECOMMUNICATION INFORMATION:
?
? TELEPHONE: (202) 371-2600
?
? TELEFAX: (202) 371-2540
? INFORMATION FOR SEQ ID NO: 8:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 361 amino acids
? TYPE: amino acid
? TOPOLOGY: linear
? MOLECULE TYPE: protein
?
? US-08-096-181A-8

```

| | | | | |
|-----------------------|------------------|--------------------|------------|-------------|
| Query Match | 12.3% | Score 112.5; | DB 4, | Length 361; |
| Best Local Similarity | 28.1% | Pred. No. 0.00022; | | |
| Matches 52; | Conservative 25; | Mismatches 65; | Indels 43; | Gaps 11 |

[illegible]

RESULT 4

1. Sequence ID: Application PC/TUS9408326
 2. GENERAL INFORMATION:
 3. APPLICANT: North American Vaccine, Inc.
 4. APPLICANT: 12103 Indian Creek Court
 5. APPLICANT: Beltsville, MD 20705
 6. APPLICANT: Pullen, Jeffrey K.
 7. APPLICANT: Soper, Thomas S.
 8. APPLICANT: Liang, Shu-Mei
 9. TITLE OF INVENTION: A Method For The High Level
 10. TITLE OF INVENTION: Expression,

;; TITLE OF INVENTION: Purification And Refolding Of The Outer Membrane
;; TITLE OF INVENTION: Protein
;; TITLE OF INVENTION: P2 From Haemophilus Influenzae Type b
;; NUMBER OF SEQUENCES: 14
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Sterne, Kessler, Goldstein & Fox
;; STREET: 1100 New York Avenue, Suite 600
;; CITY: Washington
;; STATE: D.C.
;; COUNTRY: U.S.A.
;; ZIP: 20005-3934
;; COMPUTER READABLE FORM:
;; MEDIUM TYPE: Floppy disk
;; COMPUTER: IBM PC compatible
;; OPERATING SYSTEM: PC-DOS/MS-DOS
;; SOFTWARE: Patentin Release #1.0, Version #1.25
;; CURRENT APPLICATION DATA:
;; APPLICATION NUMBER: PCT/US94/08326
;; FILING DATE: Herewith
;; CLASSIFICATION:
;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: US 08/096,181
;; FILING DATE: 23-JULY-1993
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Esmond, Robert W.
;; REFERENCE/DOCKET NUMBER: 1438.001PC01
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (202) 371-2600
;; TELEFAX: (202) 371-2540
;; INFORMATION FOR SEQ ID NO: 8:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 361 amino acids
;; TYPE: amino acid
;; TOPOLOGY: linear
;; MOLECULE TYPE: protein
;; PCT-US94-08326-8

Query Match 12.3%; Score 112.5; DB 5; Length 361;
Best Local Similarity 28.18; Pred. No. 0.00022;
Matches 52; Conservative 25; Mismatches 65; Indels 43; Gaps 11;

QY 5 KTLAASASSILLASANAISYGSNADAPYVAKIGOV-----DAKOING-----K 51
DB 3 KTLAALLVGFASASANAAYVYNNEG-TNVELGRLSIIIAOSNSTYDNOKQHGALRNQ 61
QY 52 NTAVGIYAGYNDQNF-----GVEAEFY-----GSDAKFENAGVSPYKGVKSFQAYGTY 101
DB 62 GSRPHIKATHNFGDGFYAQGLFETRFYTKASENGSD--NF-----GDITS-----KY 106
QY 102 RYNINPTFYAKGKGLIAKTKVD-VTSRNATYTS--NKSDKTSLAGG-VGVGFPLANVG 157
DB 107 AYTTLGKAKAFGEVYLGRAKTIADGITSADKEKGVLLNNSDIPTSGMTVGTFGIDGLV 166
QY 158 VEASY 162
DB 167 LGANY 171

RESULT 5
US-08-286-767-3
; Sequence 3, Application US/08286767
; Patent No. 5733760
; GENERAL INFORMATION:
; APPLICANT: Lu, Yichen
; APPLICANT: Miller, Samuel I.
; TITLE OF INVENTION: SALMONELLA VECTORS ENCODING TRUNCATED
; TITLE OF INVENTION: pagc FUSION PROTEIN, METHOD OF MAKING, AND USES THEREO
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: RONALD I. EISENSTEIN; DIKE, BRONSTEIN,
; ADDRESSEE: ROBERTS & CUSHMAN

;; STREET: 130 Water Street
;; CITY: Boston
;; STATE: Massachusetts
;; COUNTRY: US
;; ZIP: 02109
;; COMPUTER READABLE FORM:
;; MEDIUM TYPE: Floppy disk
;; COMPUTER: IBM PC compatible
;; OPERATING SYSTEM: PC-DOS/MS-DOS
;; SOFTWARE: Patentin Release #1.0, Version #1.25
;; CURRENT APPLICATION DATA:
;; APPLICATION NUMBER: US/08/286,767
;; FILING DATE: 05-AUG-1994
;; CLASSIFICATION: 424
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Resnick, David S.
;; REGISTRATION NUMBER: 34235
;; REFERENCE/DOCKET NUMBER: 44420
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (617) 523-3400
;; TELEFAX: (617) 523-6400
;; TELEX: 200291 STRE UR
;; INFORMATION FOR SEQ ID NO: 3:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 188 amino acids
;; TYPE: amino acid
;; TOPOLOGY: linear
;; MOLECULE TYPE: protein
;; US-08-286-767-3

Query Match 11.8%; Score 108; DB 1; Length 188;
Best Local Similarity 24.28; Pred. No. 0.00028;
Matches 50; Conservative 29; Mismatches 82; Indels 46; Gaps 8;

QY 1 MKTKTLAASASSILLASANAISYGSNADAPYVAKIGOVDAKQJNGKNTAVGIYAG 60
DB 1 MKNIIISLVITTSVLVYVNAQDTNMFSGVYARAQSKV--QDEKKNRGVNVK----- 53
QY 61 YNDQNGVEAEFYVGSDAKEFNAGVSPYKGVKSFQA-----YGT----- 100
DB 54 -----RYEDSDVSFSSISLSLYGDRQASGSVEPEGIHYHDKFEVYGGSLWGP 102
QY 101 -RYRNFTPTFYAKGKGLIAK-TKVDYTSRNATYTSNK--SDKTSLAGGVGFPLANV 156
DB 103 AYRLS-DNFSLYALAGVTVATREHSTODGDSFSNKRISRTKGFAGAGVOMNPLENI 161
QY 157 GVEASY--NYLSEDAANISGAHLAF 180
DB 162 VVDVGEBSNISTTKINGFNNGVGYRF 188

RESULT 6
PCT-US95-13749-5
; Sequence 5, Application PC/TUS9513749
; GENERAL INFORMATION:
; APPLICANT: Amgen Inc.
; TITLE OF INVENTION: COMPOSITIONS FOR INCREASED
; TITLE OF INVENTION: BIOAVAILABILITY OF ORALLY DELIVERED THERAPEUTIC AGENTS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Amgen Inc.
; STREET: 1840 Dehavilland Drive
; CITY: Thousand Oaks
; STATE: California
; COUNTRY: USA
; ZIP: 91320-1789
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:

```

: APPLICATION NUMBER: PCT/US95/13749
: FILING DATE:
: CLASSIFICATION:
: INFORMATION FOR SEQ ID NO: 5:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 568 amino acids
: TYPE: amino acid
: STRANDEDNESS: unknown
: TOPOLOGY: unknown
: MOLECULE TYPE: protein
: PCT-US95-13749-5

Query Match 11.7%; Score 106.5; DB 5; Length 568;
Best Local Similarity 30.1%; Pred. No. 0.0019;
Matches 55; Conservative 19; Mismatches 72; Indels 37; Gaps 10;

QY 10 VSASSLMSANNAISY-----GNSADAQPYVGAIKIGOVDAKQINGKNTATGTYAGYFNFDQ 65
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db 411 VYAASESSISISIGYAOSSHVXENGTYTLNDP-----KGFNLKY-----RYELDD 452

OY 66 NGVEEKEFVGS-DAKFENGVSPV-KGDVKSFGAYGTYRYNF-INTFYAKGKIGIAKTX 122
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db 453 NMGVGSGFYHTQGDYDFEFGSNKFGHGDYISY--TMGFSFRINEVYSLYGLGAHAK 510
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
QY 123 VDVTSRNATTY--SNKSDXTSLAGVGVGKPLANVGVEASYNLYLSEDAAIS---LGAH 177
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db 511 V-----KASVFDESISAKSTSMAYGAGVGFNPPLNFVIDASYEYSKIDSIKVGTMIGAG 565
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
QY 178 LAF 180
   | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db 566 YRF 568 -

RESULT 7
US-08-210-394-1
: Sequence 1, Application US/08210394
: Patent No. 5770213
: GENERAL INFORMATION:
: APPLICANT: Zlotnick Dr., Gary W.
: TITLE OF INVENTION: Purified No. 5770213typable Haemophilus
: TITLE OF INVENTION: Influenzae P5 Protein as a Vaccine for No. 5770213typable
: NUMBER OF SEQUENCES: 1
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: American Cyanamid Company
: STREET: One Cyanamid Plaza
: CITY: Wayne
: STATE: New Jersey
: COUNTRY: US
: ZIP: 07470-8426
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patent Release #1.0, Version #1.25
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/210,394
: FILING DATE: 07-MAR-1994
: CLASSIFICATION: 424
: ATTORNEY/AGENT INFORMATION:
: NAME: Harrington, James J
: REFERENCE/DOCKET NUMBER: 32,144
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 201/831-3246
: TELEFAX: 201/831-3305
: INFORMATION FOR SEQ ID NO: 1:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 338 amino acids
: TYPE: amino acid
: STRANDEDNESS: unknown
: TOPOLOGY: unknown
: MOLECULE TYPE: protein

```

```

US-08-210-394-1
Query Match          11.6%, Score 105.5; DB 1; Length 338;
Best Local Similarity 25.6%; Pred. No. 0.0012;
Matches 50; Conservative 17; Mismatches 65; Indels 63; Gaps 11.

QY      35 YVGAKISG---VDAQIQ-----KNF-AVCIVAGYN--DQNGVEAE 72
        ||||| | | | | | | | | | | | | | | | | | | | | |
DB       8 YAGVAGGGGGSEHDGINNGAIKEDSIDLTGLGYGRNRPFTYGEGYQLINDNFGLAE 67
        ||||| | | | | | | | | | | | | | | | | | | | | |

QY      73 EVGS D-----AKEFNAGVS-PVKGDVKSFGAYGTYYNFIPTFYAKGKL 117
        :| | | | | | | | | | | | | | | | | | | | |
DB       68 -LGYNPFGRVRFRAAGTKRKTAKHTNIGALHSLKGSYEVDGLDY-----GNAG 114
        :| | | | | | | | | | | | | | | | | | | | |

QY      118 IAKTKVD--VTSRNATTYSNKSDKTSLAG--VGCGFKPLANVGEASY-----NY 164
        :| | | | | | | | | | | | | | | | | | | | |
DB       115 VALVSDYKFYEAPNSTDXKKGTHRTARASGLFAVGAEYAVLPDLAVLELYQLTRGVKY 174
        :| | | | | | | | | | | | | | | | | | | | |

QY      165 LSEDANAISLGHAHLA 179
        :| | | | | | | | | | | | | | | | | | | | |
DB       175 RPQDKNAISPINPNTA 189
        :| | | | | | | | | | | | | | | | | | | | |

RESULT      8
US-08-486-715-5
; Sequence 5, Application US/08486715
; Patent No. 5674724
; GENERAL INFORMATION:
; APPLICANT: MILLER, Samuel I.
; TITLE OF INVENTION: SALMONELLA VIRULENCE GENES
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P. C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 502 or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: Wordperfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/486,715
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/090,526
; FILING DATE: 09-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/629,602
; FILING DATE: 18-DEC-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 00786/192005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-5070
; TELEFAX: (617) 542-8906
; TELEX: 200154
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 188 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-486-715-5

```

Best Local Similarity 27.0%; Pred. No. 0.001;
Matches 53; Conservative 28; Mismatches 91; Indels 24; Gaps 10;

QY 1 MKTLKTLAVSASSILAMSAANAISYNSADAPYVGAKEIGVDKAKOINGKNTAYGIYAG 60
Db 1 MKNIIILSTLVITTSVLVNVAAQDTNMFVSIGYARAQSKV--QDFKNIRGVNVK----R 54
QY 61 YNFDQ--NFGVEAEFVSGDAKEFNAGVSPV-----KGDVK--SEGAIGTRYRNFINTPF 110
Db 55 YEDDSPVFSFISLSYLXGD--RQASGSVEPEGIHVDKFEVXKXSLMGPAYRLS--DNFSL 112
QY 111 YAKKGLGIAR--TKYDVTSRNNATYTSNK--SDKTSIAGVGVGFPPLANVGVEASY----NY 164
Db 113 YALAGVGTAKTEKEHSTQDSDSFSNKISSRKTGFAMGAGVQMPLENIYVDVGEGSNI 172
QY 165 LSEDAANAISLGAHLAF 180
Db 173 SSTKINGFNVGVGYRF 188

RESULT 9

US-08-486-719-5
; Sequence 5, Application US/08486719
; Patent No. 5674736
; GENERAL INFORMATION:
; APPLICANT: Miller, Samuel I.
; TITLE OF INVENTION: SALMONELLA VIRULENCE GENES
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P. C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 502 or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: Wordperfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/486,719
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/090,526
; FILING DATE: 09-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/629,602
; FILING DATE: 18-DEC-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 00786/192002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-5070
; TELEFAX: (617) 542-8906
; TELEX: 200154
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 188 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-486-719-5

Query Match 11.3%; Score 103; DB 1; Length 188;
Best Local Similarity 27.0%; Pred. No. 0.001;
Matches 53; Conservative 28; Mismatches 91; Indels 24; Gaps 10;
QY 1 MKTLKTLAVSASSILAMSAANAISYNSADAPYVGAKEIGVDKAKOINGKNTAYGIYAG 60

Db 1 MKNIIILSTLVITTSVLVNVAAQDTNMFVSIGYARAQSKV--QDFKNIRGVNVK----R 54
QY 61 YNFDQ--NFGVEAEFVSGDAKEFNAGVSPV-----KGDVK--SEGAIGTRYRNFINTPF 110
Db 55 YEDDSPVFSFISLSYLXGD--RQASGSVEPEGIHVDKFEVXKXSLMGPAYRLS--DNFSL 112
QY 111 YAKKGLGIAR--TKYDVTSRNNATYTSNK--SDKTSIAGVGVGFPPLANVGVEASY----NY 164
Db 113 YALAGVGTAKTEKEHSTQDSDSFSNKISSRKTGFAMGAGVQMPLENIYVDVGEGSNI 172
QY 165 LSEDAANAISLGAHLAF 180
Db 173 SSTKINGFNVGVGYRF 188

RESULT 10

US-08-476-100-5
; Sequence 5, Application US/08476100
; Patent No. 5731196
; GENERAL INFORMATION:
; APPLICANT: Miller, Samuel I., III
; APPLICANT: Mekalanos, John J.
; TITLE OF INVENTION: SALMONELLA VIRULENCE GENES
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P. C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 502 or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: Wordperfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/476,100
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/090,526
; FILING DATE: 09-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/629,602
; FILING DATE: 18-DEC-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 00786/192003
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-5070
; TELEFAX: (617) 542-8906
; TELEX: 200154
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 188 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-476-100-5

Query Match 11.3%; Score 103; DB 1; Length 188;
Best Local Similarity 27.0%; Pred. No. 0.001;
Matches 53; Conservative 28; Mismatches 91; Indels 24; Gaps 10;
QY 1 MKTLKTLAVSASSILAMSAANAISYNSADAPYVGAKEIGVDKAKOINGKNTAYGIYAG 60
Db 1 MKNIIILSTLVITTSVLVNVAAQDTNMFVSIGYARAQSKV--QDFKNIRGVNVK----R 54

```

QY      61  YNFOQ--NFGEAFVPSDKNEFNAGSPV-----KGADV--SFEGYGRYRNFINTPE 110
Db      55  YEDDSPVFSISSLSELYLGD--RQASGVSEPEBGIHNDKFEVKKXSLMWGPAIRLS-DNFSL 112
QY      111 YAKCKLGLAK-TKQDVNSRNATITYSNK--SDKTSLAGVGVGRRPLNAGVEASY---NY 164
Db      113 YALGAGVGVKTFEHSQDDSDSSNKRISRRKGFAGWAGVQMNPLENIYVDVGEGSNI 172
QY      165 LSEDAANISGLAHLAF 180
Db      173 SSTRKINGFNWGVGYRF 188

```

```

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1
```

[illegible]

| | | | | |
|----|-----|---|-----|-----|
| OY | 111 | YAKKOTIGLAK--TKVDVSRNATTVTSNK--SDKTSLAGVGCVGEFPLANVEEASV--- | nY | 164 |
| Dd | 113 | YALGAVGVVKATPEHEHSTQGDSDSPSNKISSRKTGFAMGACGVQMNPENIIVVDGYESNI | 172 | |
| OY | 165 | LSEDAANAISGLAHAF | 180 | |
| Dd | 173 | SSTKINGENNCGVTRE | 188 | |

```

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040

```

[illegible]


```

; ZIP: 94608-2916
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/470,260
; FILING DATE:
; CLASSIFICATION:
; PRIORITY APPLICATION DATA:
; APPLICATION NUMBER: US 08/256,848
; FILING DATE: 21-OCT-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: McClung, Barbara G.
; REGISTRATION NUMBER: 33,113
; REFERENCE/DOCKET NUMBER: 0316.001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2708
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1296 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-470-260-3

```

```

Query Match          9.9%; Score 90; DB 3; Length 1296;
Best Local Similarity 27.2%; Pred. No. 0.39;
Matches 47; Conservative 20; Mismatches 54; Indels 52; Gaps 10;

QY 9 AVSASSLLANASANAISYGNADAPYVGAKIQVDAKQINGKNTAYGIYAGYNFDQNG 68
   | : | | : | | : | | : | | : | | : | | : | | : | | : | | : |
DB 1034 AIGGTS-LNNGSNASL-YGTSAGVDAYLN--GQVEA--IVGGGSGYG-YSSFN----- 1079

QY 69 VEAFVGSDAKERNAGSPYKGVKSGAAGTYRYNFINPFTAKGLGIATKRVDTYTSR 128
   : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
DB 1080 -----NRANSLSNGANNF-----NFGVYSRIFANQHEPDFEAGALG----- 1116

QY 129 NATTYSNKSDKTSIAGGVGVGFKPLANVGVEASYNVLS-EDANAISLGAHLAF 180
   | : | | : | : | : | : | : | : | : | : | : | : | : | : | : |
DB 1117 -----SPQSSL-----NFKSALLQDLNQSIHYHLAYSATRASTGYDPAF 1155

```

Search completed: August 7, 2002, 17:10:11
 Job time: 32 sec

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: August 7, 2002, 17:10:55 ; Search time 39.64 Seconds
(without alignments)
702.641 Million cell updates/sec

Title: US-09-164-714-7

Perfect score: 912
Sequence: 1 MKTLKTLAASASLSLAMS.....SYNYLSEDAANISLAHLAF 180

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 475226 seqs, 154737215 residues

Total number of hits satisfying chosen parameters: 475226

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

Pending Patents_AA_New:*
1: /cgn2_6/prodata/2/paa/PCT_NEW_COMB.pep:*
2: /cgn2_6/prodata/2/paa/US06_NEW_COMB.pep:*
3: /cgn2_6/prodata/2/paa/US07_NEW_COMB.pep:*
4: /cgn2_6/prodata/2/paa/US08_NEW_COMB.pep:*
5: /cgn2_6/prodata/2/paa/US09_NEW_COMB.pep:*
6: /cgn2_6/prodata/2/paa/US10_NEW_COMB.pep:*
7: /cgn2_6/prodata/2/paa/US60_NEW_COMB.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|--------------------------------------|
| 1 | 130 | 14.3 | 369 | 5 | US-09-545-199F-153 Sequence 153, App |
| 2 | 117 | 12.8 | 572 | 6 | US-10-125-692-11 Sequence 11, App1 |
| 3 | 101.5 | 11.1 | 364 | 5 | US-09-545-199F-151 Sequence 151, App |
| 4 | 101.5 | 11.1 | 3971 | 5 | US-09-904-101B-7 Sequence 7, App1 |
| 5 | 99.5 | 10.9 | 357 | 5 | US-09-120-051C-9 Sequence 9, App1 |
| 6 | 99.5 | 10.9 | 357 | 5 | US-09-120-051D-9 Sequence 9, App1 |
| 7 | 97.5 | 10.7 | 1265 | 7 | US-60-360-039-3134 Sequence 3, App1 |
| 8 | 90 | 9.9 | 1296 | 5 | US-09-410-835C-3 Sequence 3, App1 |
| 9 | 88.5 | 9.7 | 174 | 5 | US-09-684-883-2 Sequence 2, App1 |
| 10 | 86.5 | 9.5 | 427 | 5 | US-09-540-209B-6145 Sequence 6, App1 |
| 11 | 84 | 9.2 | 174 | 5 | US-09-684-883-6 Sequence 6, App1 |
| 12 | 83 | 9.1 | 1833 | 6 | US-10-175-275-4 Sequence 4, App1 |
| 13 | 83 | 9.1 | 1833 | 6 | US-10-175-282-4 Sequence 4, App1 |
| 14 | 83 | 9.1 | 1992 | 6 | US-10-031-165-3 Sequence 3, App1 |
| 15 | 83 | 9.1 | 1992 | 6 | US-10-031-165-13 Sequence 13, App1 |
| 16 | 83 | 9.1 | 1992 | 6 | US-10-175-275-3 Sequence 3, App1 |
| 17 | 83 | 9.1 | 1992 | 6 | US-10-175-282-3 Sequence 3, App1 |
| 18 | 83 | 9.1 | 2047 | 6 | US-10-031-165-4 Sequence 4, App1 |
| 19 | 83 | 9.1 | 2047 | 6 | US-10-031-165-7 Sequence 7, App1 |
| 20 | 82 | 9.0 | 2053 | 6 | US-10-031-165-9 Sequence 9, App1 |
| 21 | 80.5 | 8.8 | 343 | 5 | US-09-120-051C-4 Sequence 4, App1 |
| 22 | 80.5 | 8.8 | 343 | 5 | US-09-120-051D-4 Sequence 4, App1 |
| 23 | 80 | 8.8 | 362 | 5 | US-60-360-039-786 Sequence 786, App |
| 24 | 79.5 | 8.7 | 175 | 5 | US-09-684-883-4 Sequence 4, App1 |
| 25 | 79.5 | 8.7 | 424 | 6 | US-10-179-131-5337 Sequence 5337, Ap |
| 26 | 79.5 | 8.7 | 953 | 5 | US-09-935-625-9135 Sequence 9135, Ap |

| | | | | | |
|----|------|-----|------|---|--|
| 27 | 79.5 | 8.7 | 1010 | 5 | US-09-935-625-9134 Sequence 9134, Ap |
| 28 | 78.5 | 8.6 | 669 | 5 | US-09-629-469A-16485 Sequence 16485, A |
| 29 | 77.5 | 8.5 | 198 | 5 | US-09-540-209B-9654 Sequence 9654, Ap |
| 30 | 77.5 | 8.5 | 683 | 5 | US-09-620-412C-357 Sequence 357, App |
| 31 | 77.5 | 8.5 | 1776 | 5 | US-09-620-412C-179 Sequence 179, App |
| 32 | 76.5 | 8.4 | 217 | 5 | US-09-545-199F-127 Sequence 127, App |
| 33 | 76.5 | 8.4 | 300 | 7 | US-60-360-039-13596 Sequence 13596, A |
| 34 | 76.5 | 8.4 | 580 | 1 | PCT-US01-13240-1 Sequence 4, App1 |
| 35 | 76.5 | 8.4 | 773 | 1 | PCT-US01-13240-6 Sequence 6, App1 |
| 36 | 76.5 | 8.4 | 848 | 5 | US-09-540-209B-9955 Sequence 9955, Ap |
| 37 | 76.5 | 8.4 | 1194 | 5 | US-09-935-625-16231 Sequence 16231, A |
| 38 | 76.5 | 8.4 | 1339 | 5 | US-09-935-625-16230 Sequence 16230, A |
| 39 | 76.5 | 8.4 | 1345 | 5 | US-09-935-625-16229 Sequence 16229, A |
| 40 | 76.5 | 8.4 | 3241 | 1 | PCT-US01-13240-1 Sequence 1, App1 |
| 41 | 76 | 8.3 | 375 | 7 | US-60-360-039-18285 Sequence 18285, A |
| 42 | 75.5 | 8.3 | 175 | 5 | US-09-684-883-30 Sequence 30, App1 |
| 43 | 75 | 8.2 | 145 | 5 | US-09-905-176-21 Sequence 21, App1 |
| 44 | 75 | 8.2 | 353 | 5 | US-09-120-051C-2 Sequence 2, App1 |
| 45 | 75 | 8.2 | 353 | 5 | US-09-120-051D-2 Sequence 2, App1 |

ALIGNMENTS

```
RESULT 1
US-09-545-199F-153
; Sequence 153, Application US/09545199F
; GENERAL INFORMATION:
; APPLICANT: Lowery E., David
; APPLICANT: Fuller E., Troy
; APPLICANT: Kennedy J., Michael
; TITLE OF INVENTION: Anti-Bacterial Vaccine Compositions
; FILE REFERENCE: 28341/6227.NCP
; CURRENT APPLICATION NUMBER: US/09/545,199F
; PRIOR FILING DATE: 2000-04-06
; PRIOR APPLICATION NUMBER: 60/153,453
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/128,689
; NUMBER OF SEQ ID NOS: 165
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 153
; LENGTH: 369
; TYPE: PRT
; ORGANISM: Actinobacillus pleuropneumoniae
US-09-545-199F-153

Query Match 14.3%; Score 130; DB 5; Length 369;
Best Local Similarity 25.5%; Pred. No. 2,1e-05;
Matches 50; Conservative 24; Mismatches 76; Indels 46; Gaps 8;

QY 14 SLAMSANAISYSGNSADAQP--YVGAKIGOVDAKQ-----ING 50
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
Db 4 SLVALAVLSAANAQAQAQNTFYAGAKVQSSFFHGVNQLKSGHDDRYNDKTRKGINR 63
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|

QY 51 KNTAYGTAAGTNF--DQNFGEVAEFVSGDAKEFNAGVSPVKGDVKSEFA--YGTIRYVFI 106
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
Db 64 NSVTYGVGGYQIILNÖNNEGLAAB-LGYDY-----YGRVRKNVDEFTYVHSAGLILA 116
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|

QY 107 NTPFY-----AKGLGIARTKVD-----VTSRNATYVSNKSDKTSLAGGVGFKPLA 154
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
Db 117 LKPSIEVLPDDYGVKAVIAYVRNDYKRYGKAENTNESTTKFKLAKASTILLAGVEXAILP 176
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|

QY 155 NVGVEASYNYLSEDAAN 170
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
Db 177 ELARVEXQYLKRNKN 192
|||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|

RESULT 2
US-10-125-692-11
; Sequence 11, Application US/10125692
; GENERAL INFORMATION:
```

```
; APPLICANT: Aderem, Alan
; APPLICANT: Hayashi, Fumitaka
; APPLICANT: Smith, Kelly D.
; APPLICANT: Underhill, David M.
; APPLICANT: Ozinsky, Adrian
; TITLE OF INVENTION: Toll-Like Receptor 5 Ligands and Methods
; FILE REFERENCE: P-1S 5155
; CURRENT APPLICATION NUMBER: US/10/125,692
; CURRENT FILING DATE: 2002-04-17
; PRIOR APPLICATION NUMBER: US 60/285,477
; PRIOR FILING DATE: 2001-04-20
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 572
; TYPE: PRF
; ORGANISM: C. jejuni
US-10-125-692-11
```

```
Query Match 12.8%; Score 117; DB 6; Length 572;
Best Local Similarity 24.5%; Pred. No. 0.00081;
Matches 50; Conservative 24; Mismatches 70; Indels 60; Gaps 7;
```

```
QY 22 AATSYGNSADAPYVGAIGQVDAKQ-----INGKNTAYGIYA----- 59
DB 242 AAVRAGATSTPAINGVKIKVYKDGANGALVMAINSKDTTGVASIDANGQLLTS 301
QY 60 ----GIVFDONFVEAEFVSDEAKENFAGVSPKGVDK-----SEFAGYGYRY 103
DB 302 REGGIRKIDNIGGA-FINADMKENGRSLYKNDGKDLISGSNLSAGFGA----- 354
QY 104 NFINTPEYAKGKIAGTKR--VDVTSNATTTYSNKSDDKTSLAG-----GVGVGEKP 152
DB 355 ----TOPISGASVSRKSKQIDANIDAMGFGSANGVYLGITSSVATWSSAGSGFSS 410
QY 153 LANVGEASYNVLSSEDAATSLGA 176
DB 411 GSGYSVSGSKNTSGFANALAIISA 434
```

```
RESULT 3
US-09-545-199F-151
; Sequence 151, Application US/09545199F
; GENERAL INFORMATION:
; APPLICANT: Lowery E., David
; APPLICANT: Fuller E., Troy
; APPLICANT: Kennedy J., Michael
; TITLE OF INVENTION: Anti-Bacterial Vaccine Compositions
; FILE REFERENCE: 28341/6227.NCP
; CURRENT APPLICATION NUMBER: US/09/545,199F
; CURRENT FILING DATE: 2000-04-06
; PRIOR APPLICATION NUMBER: 60/153,453
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/128,689
; PRIOR FILING DATE: 1999-04-09
; NUMBER OF SEQ ID NOS: 165
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 151
; LENGTH: 364
; TYPE: PRF
; ORGANISM: Actinobacillus pleuropneumoniae
US-09-545-199F-151
```

```
Query Match 11.1%; Score 101.5; DB 5; Length 364;
Best Local Similarity 25.9%; Pred. No. 0.018;
Matches 51; Conservative 25; Mismatches 74; Indels 47; Gaps 11;
```

```
QY 14 SLAMASANAISYGNADAP--YVGAIG-----QVDAKQ-----INKNT 53
DB 4 SLVATVLSAAVAQAAPQONTPEYAGAKAGWASFHGIEQLDSAKNTDRTGYGINRSV 63
```

```
QY 54 AYGIVAGYNF--DQNFVEAEFVGS-----AKEFNAGVSPKGVDSF--GAGYGYRY 103
DB 64 TYGVGSGVQILNOKKLGLAE-LGYDYFGRVRSSEKENG-----KADKTFHNAHGA--- 115
QY 104 NFINTPEY-----AKGKIAGTKVQVTSRNATTTYSNKS DK--TSLAGVGVGFPLA 154
DB 116 TIALKPSYEVLPLDLDVGVKQVIALVNNTYKTFNNAQEKVTRRFOSSLILGAGVEYALLP 175
QY 155 NVGVEASYNVISEDANA 171
DB 176 ELARVEYQWLNNAGKA 192
```

```
RESULT 4
US-09-904-101B-7
; Sequence 7, Application US/09904101B
; GENERAL INFORMATION:
; APPLICANT: WHITE, PERRIN C.
; APPLICANT: MCNILLIAN, RANDY D.
; TITLE OF INVENTION: HUMAN VERY LARGE G-PROTEIN COUPLED RECEPTOR (VLGR1)
; FILE REFERENCE: UTSO:750US
; CURRENT APPLICATION NUMBER: US/09/904,101B
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: 60/227,952
; PRIOR FILING DATE: 2000-08-25
; NUMBER OF SEQ ID NOS: 333
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 3971
; TYPE: PRF
; ORGANISM: Mus musculus
US-09-904-101B-7
```

```
Query Match 11.1%; Score 101.5; DB 5; Length 3971;
Best Local Similarity 27.8%; Pred. No. 0.39;
Matches 44; Conservative 21; Mismatches 72; Indels 21; Gaps 7;
```

```
QY 18 MSANAISYGNADAPYVGAIGQVDAKQINGKNTAYGIYAGYNPDONFVEAEFVGS 77
DB 3022 VSDNKKDYATNRKVDGARY-----KGVKNVSGSNTV-SVRSYGTAKNMSVANSVSGSA 3074
QY 78 AKEFNAGVSPKGVDSKFGAVGYRYNFINPFAKGLKGIAGTKRVDTSRNATTTYSNK- 136
DB 3075 AMD-KAGTSVM-----VSRKGTGRVAMTGTGA-GSVGNMTGSSVHGKKGWTSGRA 3126
QY 137 --SDKTSLAGVGVGFPLANVGEASYNVISEDANA 172
DB 3127 VHSGRSSAAGARGSG--TTAMGVSSSRNNTVSDATRCV 3161
```

```
RESULT 5
US-09-120-051C-9
; Sequence 9, Application US/09120051C
; GENERAL INFORMATION:
; APPLICANT: Glisson, John Robert
; APPLICANT: Luo, Yugang
; TITLE OF INVENTION: DNA encoding the outer membrane protein of Pasteurella multocida
; FILE REFERENCE: 757.0030SI
; CURRENT APPLICATION NUMBER: US/09/120,051C
; CURRENT FILING DATE: 1998-07-21
; PRIOR APPLICATION NUMBER: US 60/067,957
; PRIOR FILING DATE: 1997-12-08
; NUMBER OF SEQ ID NOS: 58
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 357
; TYPE: PRF
; ORGANISM: Haemophilus influenzae
US-09-120-051C-9
```

```
Query Match
Best Local Similarity 27.0%; Score 99.5; DB 5; Length 357;
Matches 51; Conservative 27; Mismatches 76; Indels 35; Gaps 10;

QY 5 KTLIAVASALLAMSAANAISYGNADAPYVAKIGOV-----DAKQING----K 51
    ||| : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 3 KTLAALIVAFMAASANAAYVYNNEG--TKVELGGRLTIIAEQSSNTLDDQKQHGALRNQ 61

QY 52 NTAVGIYAGNFDONF-----GVEAEFVGSDAKEFNAGVSPYKGVKSFAGVGT--YRINFI 106
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 62 GSRPHIKATNHFDDGFYAGQYLETRF-----VSKYKDNADHFDSTITRYAVVTL 110

QY 107 NTFPYAKGKIGIAKTKVD--VTSRNATYYS--NKS D K T S L A G G--VGVGFKPLANGVEASY 162
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 111 GNKALGEVKIGRAKTIADGITSADREKGYVNNKSYIPTNGNTGYTFEGIDGLVLCANY 170

QY 163 NYLSEDAANA 171
    : : : : :
Db 171 -LLAQORNA 178

RESULT 6
US-09-120-051D-9
; Sequence 9, Application US/09120051D
; GENERAL INFORMATION:
; APPLICANT: Glisson, John Robert
; APPLICANT: Luo, Yugang
; TITLE OF INVENTION: DNA encoding the outer membrane protein of Pasteurella multocida
; FILE REFERENCE: 757,0030S1
; CURRENT APPLICATION NUMBER: US/09/120,051D
; PRIOR FILING DATE: 1998-07-21
; PRIOR APPLICATION NUMBER: US 60/067,957
; PRIOR FILING DATE: 1997-12-08
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 357
; TYPE: PRF
; ORGANISM: Haemophilus influenzae
US-09-120-051D-9

Query Match
Best Local Similarity 10.9%; Score 99.5; DB 5; Length 357;
Matches 51; Conservative 27; Mismatches 76; Indels 35; Gaps 10;

QY 5 KTLIAVASALLAMSAANAISYGNADAPYVAKIGOV-----DAKQING----K 51
    ||| : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 3 KTLAALIVAFMAASANAAYVYNNEG--TKVELGGRLTIIAEQSSNTLDDQKQHGALRNQ 61

QY 52 NTAVGIYAGNFDONF-----GVEAEFVGSDAKEFNAGVSPYKGVKSFAGVGT--YRINFI 106
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 62 GSRPHIKATNHFDDGFYAGQYLETRF-----VSKYKDNADHFDSTITRYAVVTL 110

QY 107 NTFPYAKGKIGIAKTKVD--VTSRNATYYS--NKS D K T S L A G G--VGVGFKPLANGVEASY 162
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 111 GNKALGEVKIGRAKTIADGITSADREKGYVNNKSYIPTNGNTGYTFEGIDGLVLCANY 170

QY 163 NYLSEDAANA 171
    : : : : :
Db 171 -LLAQORNA 178

RESULT 7
US-60-360-039-3134
; Sequence 3134, Application US/60360039
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Chen, Xianfeng
; APPLICANT: Goldman, Barry S.
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
```

```
; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: 38-10(52052)A
; CURRENT APPLICATION NUMBER: US/60/360,039
; CURRENT FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 3134
; LENGTH: 1265
; TYPE: PRF
; ORGANISM: Neurospora crassa
US-60-360-039-3134

Query Match
Best Local Similarity 10.7%; Score 97.5; DB 7; Length 1265;
Matches 33; Conservative 23; Mismatches 44; Indels 31; Gaps 5;

QY 67 FGVEAEFVGSDAKEFNAGV-----PVKGDV-----KSEGAYGYRYNF- 105
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 728 FDIPTVYSGNKKVGRGVALLSVRPTVGTKRMLQGDISVPIMGSNFEYIGTVNFNL 787

QY 106 INTPEYAKGKIGIAKTKVDYTSRNATYYSNKS D K T S L A G G V G V G F K P L A N G V E A S Y N L 165
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 788 VITPF-----SHPKMEVTSQO--TYWKRLDSTWVIGHRGGLKNVANKSLDQENTTI 837

QY 166 SEDANAISLGA 176
    : : : : :
Db 838 PSFIAANLGA 848

RESULT 8
US-09-410-835C-3
; Sequence 3, Application US/09410835C
; GENERAL INFORMATION:
; APPLICANT: Covacci, Antonello
; APPLICANT: Bugnoli, Massimo
; APPLICANT: Telford, John
; APPLICANT: Macchia, Giovanni
; APPLICANT: Rappunli, Rino
; TITLE OF INVENTION: Helicobacter pylori CAI Antigen Polynucleotides
; FILE REFERENCE: CHIR0213
; CURRENT APPLICATION NUMBER: US/09/410,835C
; CURRENT FILING DATE: 2002-06-13
; PRIOR APPLICATION NUMBER: 08/471,491
; PRIOR FILING DATE: 1995-06-06
; PRIOR APPLICATION NUMBER: 08/256,848
; PRIOR FILING DATE: 1994-10-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 1296
; TYPE: PRF
; ORGANISM: Helicobacter pylori
US-09-410-835C-3

Query Match
Best Local Similarity 9.9%; Score 90; DB 5; Length 1296;
Matches 47; Conservative 20; Mismatches 54; Indels 52; Gaps 10;

QY 9 AVSASLLAMSAANAISYGNADAPYVAKIGOVDAKQINGKNATYGIYAGNFDONF 68
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1034 AIGGTS-LNNGSNASL-YGTSAGVDAYLN---GQVEA--YVGFGSYG-YSSFN----- 1079

QY 69 VEAEFVGSDAKEFNAGVSPYKGVKSFAGVGTYYRNFINTPEYAKGKIGIAKTKVDYTSR 128
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1080 -----NRANSLSNGANNNT-----NFGVYSRIEFANQHEPDEAGALG----- 1116

QY 129 NATTYSNKSDKTSLSLAGVGVGFKPLANGVEASYNLS--EDANAISLGAHLAF 180
    : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1117 -----SDQSSL-----NFKSALLDLDLQSHYILAYSATATRSYGDPAF 1155

RESULT 9
```


REFERENCE/DOCKET NUMBER: 047998/0128
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
TELEFAX: (202)672-5399
TELEX: 904136
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 174 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 6:
US-09-684-883-6

Query Match 9.2%; Score 84; DB 5; Length 174;
Best Local Similarity 28.2%; Pred. No. 0.47;
Matches 48; Conservative 22; Mismatches 70; Indels 30; Gaps 11;

QY 2 KTLKTLAASASSLLAMSAISVGNASADQPYGAKIGQYDAKINKNITAYG--IYA 59
DB 3 KALATLTA-----LALPLA-LALBAGSGF---YVQADAAHAKASSLSGANGSPRISA 52
QY 60 GYNF-DQNGVEAEFVGS-DAKEF--NAGVSPYKGDVKSFGAYGTYRYNFINTPF--YAKGL 116
DB 53 GYRINDLRAVY---TRYKNYKAPSTDEK--LVSIGASAIYDFD--TQSPVKPYLGARL 105
QY 117 GLAKTKVDYTSRNATYTSKSDKTSLAGV--GVGFKPLANVGVEASVY 164
DB 106 SLNRASVDLGG-----SDSFQSTSTGLGLVAGSVAYVTPNVDLDAGYR 149

RESULT 12
US-10-175-275-4
; Sequence 4, Application US/10175275
; GENERAL INFORMATION:
; APPLICANT: SASAKI, Ken
; APPLICANT: HARKNESS, Robin E.
; APPLICANT: LOOSMORE, Sheena M.
; APPLICANT: CHONG, Pele
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE PROTEIN OF
; FILE REFERENCE: 1038-1235 MIS
; CURRENT APPLICATION NUMBER: US/10/175,275
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: 08/945,567
; PRIOR FILING DATE: 1998-03-19
; PRIOR APPLICATION NUMBER: 08/431,718
; PRIOR FILING DATE: 1995-05-01
; PRIOR APPLICATION NUMBER: 08/478,370
; PRIOR FILING DATE: 1995-06-07
; PRIOR APPLICATION NUMBER: 08/621,944
; PRIOR FILING DATE: 1996-03-26
; PRIOR APPLICATION NUMBER: PCT/CA96/00264
; PRIOR FILING DATE: 1996-04-29
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 1833
; TYPE: PRT
; ORGANISM: Moraxella catarrhalis
US-10-175-275-4

Query Match 9.1%; Score 83; DB 6; Length 1833;
Best Local Similarity 25.2%; Pred. No. 12;
Matches 37; Conservative 23; Mismatches 55; Indels 32; Gaps 7;
QY 60 GYNFQNGVEAEFVGS-DAKEF--NAGVSPYKGDVKSFGAYGTYRYNFINTPFYAKG- 114
DB 618 GNLKNN-NNPIDFVSTGYDVFANGNATATATVHTJANKTSKVYVDVNDTTHLGT 676

QY 115 ----KLGIAKTKVDYTSRNATYTS----NKSDKTSLAGVG-----FKPLA 154
DB 677 DNNKLGVTTKTKNTSANGNTATNFNVNSDDALVANADIAENLTLAKEIHTTKGTA 736
QY 155 NVGVE-----ASYNYLSEDAANISLG 175
DB 737 DFLQTFYVKKVDENNADANATVIG 763

RESULT 13
US-10-175-282-4
; Sequence 4, Application US/10175282
; GENERAL INFORMATION:
; APPLICANT: SASAKI, Ken
; APPLICANT: HARKNESS, Robin E.
; APPLICANT: LOOSMORE, Sheena M.
; APPLICANT: CHONG, Pele
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE PROTEIN OF
; FILE REFERENCE: 1038-1234 MIS
; CURRENT APPLICATION NUMBER: US/10/175,282
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: 08/945,567
; PRIOR FILING DATE: 1998-03-19
; PRIOR APPLICATION NUMBER: 08/431,718
; PRIOR FILING DATE: 1995-05-01
; PRIOR APPLICATION NUMBER: 08/478,370
; PRIOR FILING DATE: 1995-06-07
; PRIOR APPLICATION NUMBER: 08/621,944
; PRIOR FILING DATE: 1996-03-26
; PRIOR APPLICATION NUMBER: PCT/CA96/00264
; PRIOR FILING DATE: 1996-04-29
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 1833
; TYPE: PRT
; ORGANISM: Moraxella catarrhalis
US-10-175-282-4

Query Match 9.1%; Score 83; DB 6; Length 1833;
Best Local Similarity 25.2%; Pred. No. 12;
Matches 37; Conservative 23; Mismatches 55; Indels 32; Gaps 7;

QY 60 GYNFQNGVEAEFVGS-DAKEF--NAGVSPYKGDVKSFGAYGTYRYNFINTPFYAKG- 114
DB 618 GNLKNN-NNPIDFVSTGYDVFANGNATATATVHTJANKTSKVYVDVNDTTHLGT 676
QY 115 ----KLGIAKTKVDYTSRNATYTS----NKSDKTSLAGVG-----FKPLA 154
DB 677 DNNKLGVTTKTKNTSANGNTATNFNVNSDDALVANADIAENLTLAKEIHTTKGTA 736
QY 155 NVGVE-----ASYNYLSEDAANISLG 175
DB 737 DFLQTFYVKKVDENNADANATVIG 763

RESULT 14
US-10-031-165-3
; Sequence 3, Application US/10031165
; GENERAL INFORMATION:
; APPLICANT: LOOSMORE, Sheena M.
; APPLICANT: SASAKI, Ken
; APPLICANT: YANG, Yan-ping
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: RECOMBINANT HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE
; FILE REFERENCE: 1038-1217 MIS
; CURRENT APPLICATION NUMBER: US/10/031,165
; PRIOR FILING DATE: 2002-05-15
; PRIOR APPLICATION NUMBER: 09/361,619

```
; PRIOR FILING DATE: 1999-07-27
; PRIOR APPLICATION NUMBER: PCT/CA00/00870
; PRIOR FILING DATE: 2000-07-26
; NUMBER OF SEQ ID NOS: 48
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 1992
; TYPE: PRT
; ORGANISM: Moraxella catarrhalis
US-10-031-165-3
```

Query Match

9.1%; Score 83; DB 6; Length 1992;
Best Local Similarity 25.2%; Pred. No. 14;
Matches 37; Conservative 23; Mismatches 55; Indels 32; Gaps 7;

```
OY 60 GYNFQNGEVEAEFGS--DAKEF---NAGVSPVKGDSFGAYGTYRYNFINTPFYAKG- 114
   ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 777 GPNLKN--NNPIDEFSTYDIYDFANGNATATATHTANKTSKYVDVAVDDTTIHLTGT 835

OY 115 ---KLGIAKTKVDYTSRNATYS---NKS DTS LAGGVG-----FKPLA 154
   ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 836 DNKKLGVTYTKLNTKTSANGNTATNPNVNSD DALVNAKDIAENLNTLAKEIHITTKGTA 895

OY 155 NVGVE-----ASYNYLSEDANAISLG 175
   : : : | : : ||| | | : |
DB 896 DTALQTFYVKVDENNADANAITVG 922
```

RESULT 15

```
US-10-031-165-13
; Sequence 13, Application US/10031165
; GENERAL INFORMATION:
; APPLICANT: LOOSMORE, Sheena M.
; APPLICANT: SASAKI, Ken
; APPLICANT: YANG, Yan-Ping
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: RECOMBINANT HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE
; FILE REFERENCE: 1038-1217 MIS
; CURRENT APPLICATION NUMBER: US/10/031,165
; PRIOR FILING DATE: 2002-05-15
; PRIOR APPLICATION NUMBER: 09/361,619
; PRIOR FILING DATE: 1999-07-27
; PRIOR APPLICATION NUMBER: PCT/CA00/00870
; PRIOR FILING DATE: 2000-07-26
; NUMBER OF SEQ ID NOS: 48
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
; LENGTH: 1992
; TYPE: PRT
; ORGANISM: Moraxella catarrhalis
US-10-031-165-13
```

Query Match

9.1%; Score 83; DB 6; Length 1992;
Best Local Similarity 25.2%; Pred. No. 14;
Matches 37; Conservative 23; Mismatches 55; Indels 32; Gaps 7;

```
OY 60 GYNFQNGEVEAEFGS--DAKEF---NAGVSPVKGDSFGAYGTYRYNFINTPFYAKG- 114
   ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 777 GPNLKN--NNPIDEFSTYDIYDFANGNATATATHTANKTSKYVDVAVDDTTIHLTGT 835

OY 115 ---KLGIAKTKVDYTSRNATYS---NKS DTS LAGGVG-----FKPLA 154
   ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 836 DNKKLGVTYTKLNTKTSANGNTATNPNVNSD DALVNAKDIAENLNTLAKEIHITTKGTA 895

OY 155 NVGVE-----ASYNYLSEDANAISLG 175
   : : : | : : ||| | | : |
DB 896 DTALQTFYVKVDENNADANAITVG 922
```


Fri Aug 9 10:26:31 2002

us-09-164-714-7.rapn

Page 7

THIS PAGE BLANK (USPTO)